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ABSTRACT

The National Household Education Survey (NHES) is a data collection effort of the National Center for Education Statistics that collects and publishes data on the condition of education in the United States. The NHES is designed to provide information on issues that are best addressed by contacting households rather than institutions. It is a telephone survey of the civilian, noninstitutionalized population that collects repeated measurements of the same phenomena at different times. This paper presents information on the survey design, data collection, interview timing, and data editing in the 1995 NHES Survey. The NHES:95 included two components about which respondents were interviewed: Early Childhood Program Participation and Adult Education. The first section, "Questionnaire Design," discusses the questionnaires developed for each component. The second section, "Sample Design," describes the procedures for sampling households and then for sampling household members for both components. "Data Collection" describes the NHES:94 data collection experience, including discussions of supervisor and interviewer training, data collection procedures and their results, special data collection activities, and data quality control. "Survey Administration Time" reports interview administration times for the components of the NHES:95. The time it takes respondents to complete survey interviews is an important factor in both response rate and response quality. "Data Editing" reviews the procedures used to ensure that data were complete and of high quality. Three attachments discuss range and logit edit specifications and edits for structural completeness, and present the database design diagram. (Contains 2 figures, 14 tables, and 10 references.) (SLD)

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Design, Data Collection, Interview Timing, and Data Editing in the 1995 National Household Education Survey (NHES:95)

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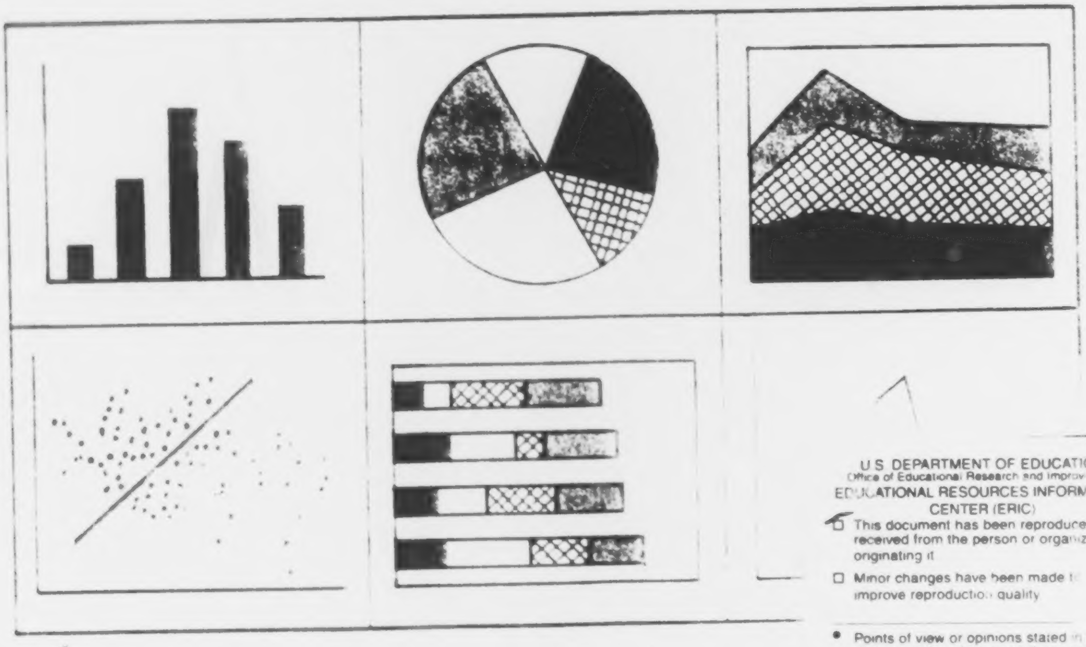

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Design, Data Collection, Interview Timing, and Data Editing in the 1995 National Household Education Survey (NHES:95)

Working Paper No. 97-08 March 1997

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March 1997

Foreword

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Design, Data Collection, Interview Timing, and Data Editing

in the

1995 National Household Education Survey (NHES:95)

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U.S. Department of Education
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National Center for Education Statistics

March 1997

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Overview of the National Household Education Survey

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics (NCES), which has as its legislative mission the collection and publication of data on the condition of education in the Nation. The NHES is specifically designed to support this mission by providing information on those educational issues that are best addressed by contacting households rather than schools or other educational institutions. The NHES provides descriptive data on the educational activities of the U.S. population and offers policymakers, researchers, and educators a variety of statistics on the condition of education in the United States.

The NHES is a telephone survey of the noninstitutionalized civilian population of the U.S. Households are selected for the survey using random digit dialing (RDD) methods, and data are collected using computer-assisted telephone interviewing (CATI) procedures. 45,000 to 60,000 households have been screened for each administration, and individuals within households who meet predetermined criteria are sampled for more detailed or extended interviews. The data are weighted to permit estimates of the entire population. The NHES survey for a given year typically consists of a Screener, which collects household composition and demographic data, and extended interviews on two substantive components addressing education-related topics. In order to assess data item reliability and inform future NHES surveys, each administration also includes a subsample of respondents for a reinterview.

The primary purpose of the NHES is to conduct repeated measurements of the same phenomena at different points in time. Throughout its history, the NHES has collected data in ways that permit estimates to be tracked across time. This includes repeating topical components on a rotating basis in order to provide comparative data across survey years. In addition, each administration of the NHES has benefitted from experiences with previous cycles, resulting in enhancements to the survey procedures and content. Thus, while the survey affords the opportunity for tracking phenomena across time, it is also dynamic in addressing new issues and including conceptual and methodological refinements.

A new design feature of the NHES program implemented in the NHES:96 is the collection of demographic and educational information on members of all screened households, rather than just those households potentially eligible for a topical component. In addition, this expanded screening feature is designed to include a brief set of questions on an issue of interest to education program administrators or policymakers. The total Screener sample size is sufficient to produce state estimates of household characteristics for the NHES:96.

The NHES has been conducted in 1991, 1993, 1995, and 1996. Topics addressed by the NHES:91 were early childhood education and adult education. The NHES:93 collected information about school readiness and school safety and discipline. The 1991 components were repeated for the NHES:95, addressing early childhood program participation and adult education. Both components underwent substantial redesign to incorporate new issues, reflect methodological advancements since 1991, and develop new measurement approaches. In the NHES:96, the topical components are parent/family involvement in education and civic involvement. The NHES:96 expanded screening feature includes a brief set of questions on public library use.

In addition to its topical components, the NHES system has also included a number of methodological investigations. These have resulted in technical reports and working papers covering diverse topics such as telephone undercoverage bias, proxy reporting, and sampling methods. This series of technical reports and working papers provides valuable information on ways of improving the NHES, which could also be useful for other surveys.

This working paper presents information on the survey design, data collection, interview timing, and data editing in the 1995 National Household Education Survey. Readers may also wish to review the other NHES:95 working papers: *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey*[1], *The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component*[2], *Undercoverage Bias in Estimates of Characteristics of Adults and 0- to 2-Year-Olds in the 1995 National Household Education Survey*[3], and *Comparison of Estimates from the 1995 National Household Education Survey*[4] for additional information on the survey. Comparable working papers are also being prepared for the NHES:96.

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[1] J.M. Brick and P. Broene. (1996). *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey*. NCES Working Paper. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

[2] J.M. Brick, J. Wernimont, and M. Montes. (1996). *The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component*. NCES Working Paper 96-14. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

[3] J.M. Brick. (1996). *Undercoverage Bias in Estimates of Characteristics of Adults and 0- to 2-Year-Olds in the 1995 National Household Education Survey*. NCES Working Paper 96-29. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

[4] M.A. Collins, K. Kim, and L.S. Loomis. (1996). *Comparison of Estimates from the 1995 National Household Education Survey*. NCES Working Paper 96-30. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

1995 National Household Education Survey
Questionnaire Design

Introduction

The 1995 National Household Education Survey (NHES:95) was a major telephone survey effort of the National Center for Education Statistics, developed to address issues that cannot be adequately addressed through institutional data collections. The NHES:95 included two topical components: **Early Childhood Program Participation (ECPP)** and **Adult Education (AE)**. These topics were also addressed in a previous administration of the NHES in 1991. Based on that experience and on the recommendations of experts in the relevant fields, modifications to the components were made for the 1995 administration.

Each of these components is related to one of the President's and Governors' National Education Goals. The ECPP component addresses issues of importance to Goal 1, "By the year 2000, all children in America will start school ready to learn." One of the objectives subsumed under Goal 1 is access to early childhood programs for all children, especially disadvantaged or disabled children. The AE component is associated with Goal 6, which states that "By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship." Objectives under this goal include strengthening the connection between education and work and providing opportunities for workers to acquire the knowledge and skills necessary to adapt to emerging technologies and markets.

The NHES:95 was a cross-sectional telephone survey of households conducted in January through April of 1995. Households were sampled using list-assisted random digit dialing methods. Over 45,000 households were screened to identify eligible respondents.

Target Populations and Sample Sizes

The **ECPP component** includes children from birth through 3rd grade, up to age 10 (as of December 31, 1994). The parent or guardian who knew the most about the child's care and education was interviewed. Typically, the respondents to the ECPP interview were the mothers of the sampled children. Up to two children in each household were selected.

For the **AE component**, interviews were conducted with persons who were age 16 and older and not enrolled in elementary or secondary school, and not on active military duty. Adults who had not finished high school and persons identified as adult education participants at the screening stage were oversampled. In most households, only one adult was interviewed; two adults could have been sampled if one or more adults in the household were AE participants who had not completed high school. In order to examine methodological issues associated with the measurement of adult education participation, a brief interview replicating the NHES:91 items determining participation status was also conducted with a special sample of adults, called the **splice sample**.

The **Basic Screener** was used to gather some information about household members in order to sample subjects for the survey components described above. Also, in an effort to expand the data collection capabilities of the NHES system, the NHES:95 included a test of an **Expanded Screener**. This instrument was used to collect the information normally obtained in a household screener for a survey of this type, plus additional information such as educational participation and attainment for all household members, country of birth and first language learned, marital status, race, and Hispanic origin. In addition, the Expanded Screener contained a brief topical component, which tested the ability to include of a set of questions on an important issue with a relatively brief preparation period. For the NHES:95 test of the Expanded Screener, the topical component addresses the **use of public libraries** by household members. The purpose of this test was to help evaluate the consequences of asking these additional items, especially in terms of response rates and amount of effort involved in obtaining completed interviews.

The sample sizes for each component of the NHES:95 are shown in table 1.

Table 1.–Summary of number of completed interviews for the NHES:95

Type of interview	Number of completed interviews
Early Childhood Program Participation Interview	14,064
Adult Education Interview	19,722
Splice Sample Adult Education Interview	3,569
Expanded Screener	1,478
Basic Screener	43,987

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Content of the NHES:95 Early Childhood Program Participation (ECPP) Component

The ECPP component focuses on children's participation in a range of care arrangements and program settings. It addresses nonparental care, that is care by persons other than the child's own parents or guardians. In addition, this component collected information on literacy activities (reading, visiting libraries), health and disability, and parent and family characteristics.

The ECPP interview contains three major "paths" or sets of questions that are appropriate to the three populations of interest: infants/toddlers (children age 0 to 2), preschoolers (those children age 3 and older who are not yet enrolled in kindergarten), and kindergartners and primary school students through third grade. While some items are different for kindergartners and primary students, their interview paths are largely the same. Figure 1 illustrates the content of the ECPP interview by major path.

For each population, information was collected on care provided on a regular basis by relatives and nonrelatives, and participation in center-based programs (day care centers, nursery schools, preschools, and prekindergartens). For preschoolers, information on Head Start participation also was collected. Parents of kindergartners and primary students were also asked about Head Start participation prior to starting school, and parents of primary students were asked about self-care by their children. Information on family members reading to the child in the previous week and visiting a library with the child in the previous month was collected for all populations. Information on health status and disability was also obtained, with specially designed questions for infants/toddlers and older children.

Information was obtained about the parents or guardians who live in the household, including first language learned, educational attainment, and labor force status. Household characteristics items include home ownership, income, and receipt of public assistance.

Figure 1.-- NHES:95 Early Childhood Program Participation items: Distribution of topics by population

Parents of children 0 to 2 years	Parents of children 3 to 5 years, not enrolled in kindergarten	Parents of children kindergarten through 3rd grade
Introductory information: birth date, race/ethnicity, child's language, household member relationships	Introductory information: birth date, race/ethnicity, child's language, household member relationships	Introductory information: birth date, race/ethnicity, child's language, household member relationships
	School status	School status
		School history and experience
Relative care programs	Relative care programs	Relative care programs
Nonrelative care programs	Nonrelative care programs	Nonrelative care programs
	Head Start programs	Head Start programs (prior to kindergarten)
Center-based programs	Center-based programs	Centers or before/after school programs
Parent preferences	Parent preferences	Parent preferences
		Self-care
Continuity of arrangements	Continuity of arrangements	Continuity of arrangements
Reading at home	Literacy activities	Literacy activities
Child health and disability	Child health and disability	Child health and disability
Parent/guardian characteristics	Parent/guardian characteristics	Parent/guardian characteristics
Household characteristics	Household characteristics	Household characteristics

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Content of the NHES:95 Adult Education (AE) Component

The NHES:95 AE component addresses participation in a wide variety of educational activities. These include programs to improve basic skills and obtain a high school equivalency certificate, English as a Second Language (ESL) courses, credential programs for certificates or degrees, apprenticeships, courses related to work, other formal structured courses taken for any reason, and computer-only or video-only instruction on the job. This broad view of adult education is designed to provide a comprehensive picture of the extent to which adults in the United States are participating in a wide range of educational activities. Within these types of education, participants were asked about topics such as the amount of time spent in programs or courses, costs associated with participation, employer support of participation, and motivations for taking the courses or programs. For the basic skills, ESL, and work-related education sections, information on barriers to participation was collected from nonparticipants. Within the work-related and other formal courses sections, data on individual courses was also collected to help describe adults' experiences. Figure 2 illustrates the content of the AE interview by population.

Figure 2.-- NHES:95 Adult Education items: Distribution of topics by population

Persons with less than high school or GED	Non-native speakers of English	All other adults
Background information: educational attainment, first language learned, employment in the last 12 months	Background information: educational attainment, first language learned, employment in the last 12 months	Background information: educational attainment, first language learned, employment in the last 12 months
Adult basic education or GED preparation	Adult basic education or GED preparation (if h.s. diploma received in another country)	
	English as a Second Language	
Credential programs	Credential programs	Credential programs
Apprenticeship programs	Apprenticeship programs	Apprenticeship programs
Work-related education	Work-related education	Work-related education
Other formal structured courses	Other formal structured courses	Other formal structured courses
Computer-only or video-only instruction on the job	Computer-only or video-only instruction on the job.	Computer-only or video-only instruction on the job
Additional background information: labor force status industry and occupation, race, Hispanic origin month/year of birth, marital status	Additional background information: labor force status industry and occupation, race, Hispanic origin, month/year of birth, marital status	Additional background information: labor force status, industry and occupation, race, Hispanic origin, month/year of birth, marital status

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

1995 National Household Education Survey Sample Design

Introduction

This section describes the sample design for the NHES:95, beginning with the procedures for sampling households and followed by the methods used for sampling household members for the Early Childhood Program Participation (ECPP), Adult Education (AE), and AE Splice extended interviews.

Sampling Households

Different methods have been developed over the years for selecting random samples of telephone households. The Mitofsky-Waksberg method of random digit dialing[5] is probably the best known of the methods. For the NHES:91 and the NHES:93, a modified Mitofsky-Waksberg method[6] was used. The NHES:95 used a different approach to RDD sampling, called a list-assisted method. This method reduces the number of unproductive calls to nonworking or nonresidential numbers (compared with simple random sampling of all numbers), produces a self-weighting sample, is a single stage and unclustered sample, and eliminates the sequential difficulties associated with the Mitofsky-Waksberg method. The major disadvantage of this method is that it incurs a coverage bias because not all telephone households are included in the sampling frame.

The list-assisted sampling used in the NHES:95 was conducted by stratifying telephone numbers by the type of 100-bank they fall within (all the numbers in a 100-bank have the same first 8 digits of the 10-digit telephone number). An equal probability random sample of telephone numbers was selected from all possible telephone numbers that were in 100-banks with at least one White Page directory-listed telephone number (called the listed stratum). Telephone numbers in 100-banks with no listed telephone numbers (called the zero-listed stratum) were not sampled. The telephone numbers in the listed stratum included both listed and unlisted numbers.

A coverage bias arises because households in the zero-listed stratum have no chance of being included in the sample. Empirical findings addressing the question of coverage bias show that the percentage of telephone numbers in the zero-listed stratum that are residential is very small (about 1.4 percent), and about 3 to 4 percent of all telephone households are in the zero-listed stratum. Furthermore, the bias resulting from excluding the zero-listed stratum is generally small[7].

The sampling frame for the NHES:95 was the GENESYS frame of all telephone numbers in 100-banks with one or more listed telephone numbers as of December 1994. GENESYS is a commercial firm which produces lists of telephone numbers. An important goal of the NHES:95 was to produce reliable estimates for subdomains defined by race and ethnicity. To accomplish this goal, telephone numbers in areas with high percentages of blacks and Hispanics were sampled at higher rates. The sampling frame used in the study contained the 1990 census counts of the percentage of persons in the area by race and ethnicity. The 100-banks were classified in the high minority concentration stratum if at least 20 percent of its population was either black or Hispanic. The banks that did not meet this requirement were classified in the low minority concentration stratum. The sampling rate in the high minority concentration stratum was twice that of the low minority stratum.[8]

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[5] Described in Waksberg, J. (1978). "Sampling Methods for Random Digit Dialing." *Journal of the American Statistical Association* 73(361): 40-46.

[6] Described in Brick, J.M. and Waksberg, J. (1991). "Avoiding Sequential Sampling With Random Digit Dialing." *Survey Methodology* 17(1): 27-42.

[7] For more information, see Brick, J.M., Waksberg, J., Kulp, D., and Starer, A. (1995). "Bias in List-Assisted Telephone Samples." *Public Opinion Quarterly* 59(2): 218-235.

A sample of 133,874 telephone numbers was selected for the NHES:95, but not all these telephone numbers were actually used, as described below. The sampled 133,874 telephone numbers were randomly allocated to the AE Splice sample (n = 10,620), the Expanded Screener sample (n = 4,040), and the regular Basic Screener sample (n = 119,214). The telephone numbers in the regular sample were then divided into random subsets for data collection. A decision was made during data collection to reduce costs by eliminating a random subsample of 13,415 telephone numbers from the regular sample. Thus, a total of 120,459 sampled telephone numbers was used in the data collection (105,799 of these numbers were for the regular sample). Of this total, 62,984 numbers were sampled from the high minority strata, including 5,553 in the AE Splice Sample and 2,112 in the Expanded Screener sample. Screening interviews were completed if the sampled telephone number was residential and the respondent agreed to participate in the survey. Assuming 53 percent of the telephone numbers were residential and the Screener response rate was 80 percent for the regular and Splice samples (all receiving the Basic Screener) and 75 percent for the Expanded Screener sample, the expected number of completed screening interviews was 50,968 [((116,419*0.53*0.80)+(4,040*0.53*0.75)) = (49,362+1,606) = 50,968]. The actual number of completed screening interviews was 45,465 (43,987 Basic Screeners and 1,478 Expanded Screeners), with the difference largely due to a lower than expected response rate at the screening stage. The final residential rate was 52 percent and the final response rates for both the Basic and Expanded Screeners was 73 percent.

Sampling Within Households

Once the enumeration of the household members was completed in the Screener, the sampling of members for the extended interviews was done by computer. Below, the procedures for sampling household members for the ECPP, AE, and AE Splice surveys are described.

Sampling for ECPP

The interviews for the ECPP component were conducted with parents/guardians of sampled children who were newborn to 10 years old and in third grade or below.[9] In households with one or two eligible children, all the children in the household were sampled. If there were more than two eligible children in the household, two were sampled from the household. In these households, children in kindergarten were sampled at a higher rate than other children (a rate of 1.5 times the rate applied to other children) to improve the precision of the estimates for this important analysis domain. The within-household sample size was limited to two eligible children to limit the amount of time required to interview parents in households with a large number of eligible children.

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[8] Research was done for the NHES Field Test of 1989, the NHES:91, and the NHES:93 that tested the effects of different sampling plans and definitions of high minority strata on sample sizes and variances of estimates. This research led to implementing the procedures just described for oversampling telephone numbers in high minority areas. This design improves the precision for estimates of blacks and Hispanics and allows the overall estimates to be as precise as possible, given the constraints of oversampling minority areas.

[9] Only those persons who met the age limits were asked the question about grade in the Screener. The October 1992 Current Population Survey shows that by having an upper age limit of 10, only 0.1 percent of children enrolled in nursery school through third grade would be excluded. These are children who are older than 10, but still enrolled in third grade or below. Only 0.3 percent of all third graders are excluded by this upper age limit.

Estimates from the October 1992 Current Population Survey (CPS) indicated that 13.5 percent of all households have exactly one child from birth to third grade (and age 10 or younger), and 10.3 percent of all households have two or more children from birth to third grade (and age 10 or younger). Based on these estimates, a sample of about 15,500 children (45,465 x {.135 + 2 x .103} equals 15,500) was expected from 45,465 screened households. Assuming an ECPP interview completion rate of about 90 percent (the rate observed for the NHES:93 School Readiness component), the expected number of completed interviews for the ECPP component with a sample of 15,500 was about 13,950. In fact, 15,573 eligible children were sampled and the actual number of completed ECPP interviews was 14,064.

Sampling for AE

Any adult aged 16 years or older, not currently enrolled in secondary school, was eligible for sampling for the AE component. Active duty personnel of the U.S. Armed Forces were excluded from the sample so that the estimates would correspond to the civilian, noninstitutionalized population, an approach consistent with the reports from many other federal surveys such as the CPS. There were two key domains of adults that required special sampling procedures: adults with low educational attainment and adults who participated in some type of adult education activity in the last 12 months. In general, one adult was sampled per household within the sampled household. However, because many Department of Education and other federal adult education programs are targeted to adults with low educational attainment, it was important to produce reliable estimates of this group. Therefore, up to two adults were eligible to be sampled in households in which any adult was classified as a low-education participant.

In order to sample adults with low educational attainment and adults who participated in some type of adult educational activity in the past 12 months at different rates, items about the participation of each adult in adult education and about high school completion were included in the Screener interview. Responses to Screener items were used to classify adults for sampling. Each adult was classified as being in one of four categories for sampling purposes:

(a) low education, participated in adult education (LP);
(b) low education, had not participated in adult education (LU);
(c) high education, participated in adult education (HP); and
(d) high education, had not participated in adult education (HU).

Some adults who were classified as participants in adult education in the Screener reported that they were not participants and vice versa. It is important to realize that the misclassification of persons in the screening interview for sampling purposes did not bias the estimates of participation, even though it made it difficult to estimate the target sample sizes in the various domains accurately.

Another important consideration that affected the accuracy of the expected sample sizes for the AE component was based on experience from the NHES:91. In planning that study, the percentage of adults who were expected to be participants was based on estimates from the 1984 CPS supplement. The actual participation rates observed in the NHES:91 were about twice the CPS estimates. Instead of using the 1984 CPS data, more recent CPS estimates of participation in adult education were prepared from the

October 1992 supplement. These estimates were higher than the 1984 CPS estimates, but still lower than the NHES:91 estimates[10]. This situation caused some uncertainty regarding the sample sizes for the NHES:95 AE component. This lower October 1992 CPS estimate was used in the design rather than the NHES:91 estimate so that the number of sampled adults would be large enough to support the precision requirements of the study.

After the adults were classified, an unequal probability sample of adults was selected. For households with only one adult, the sampling rates for the four categories ensured that LPs were selected with certainty (a probability of 1.0), LUs and HUs were selected with probability of 0.20, and HPs were selected with probability 0.50.[11] As a result, a household with one HP adult would have that adult selected 50 percent of the time and no one selected the other 50 percent. For households with more than one adult, the same base rates applied, except the sample size was restricted to sample, at most, one adult per household unless there were one or more LPs in the household. If there were one or more LPs in the household, up to two adults could be selected (one LP *would* be selected and another adult *might* be selected).

The estimates of the sample sizes for the AE component of the NHES:95 were based on assumptions about the number of adults per household, the level of adults' educational attainment, the rates of involvement in adult education, the rate of misclassification of involvement by Screener respondents, and extended interview response rates. The estimates of participation from the 1992 CPS were used to predict the percentage of adults involved in adult education activities.[12] The rates of involvement in AE were computed separately for adults with less than high school and adults who completed high school or beyond from the CPS file.

To arrive at the final estimates of the number of completed interviews, the sample sizes were modified by the previously mentioned factors as follows. First, the number of adults in the sample of 41,383 households (45,465 completed households minus the 4,082 splice sample households) was estimated to be 74,489 (41,383 x 1.8).[13] Using October 1992 CPS estimates, it was anticipated that about 790 adults (74,489 x .0106) would be classified as low education participants (LPs) and were included with certainty.[14]

The expected numbers of completed interviews for the other three categories, low education nonparticipants (LUs), high education participants (HPs), and high education nonparticipants (HUs) were computed using the sampling rate ratios subjected to the constraint of one sampled adult per household. The procedures for estimating the number of these completed interviews was as follows.

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[10] The 1984 CPS estimated participation rate was 15 percent; the rate from NHES:91 was 33 percent; and the rate from the 1992 CPS was 24 percent. All of these rates were estimated from completed interviews using the definition of adult education that included all part-time college enrollment and full-time non-college-degree-seeking activities.

[11] These probabilities were developed to meet the sample size requirements for these four categories of adults.

[12] For the 1992 CPS specifically, a participant is defined as any adult involved in any of the following activities in the last 12 months: in college; taking a business or vocational course; taking a continuing education or noncredit course; taking a course by mail, TV, or radio; taking private instruction; taking a course given by an employer, labor organization, etc.; taking a basic skills course; taking a course in English as a second language; or any other organized educational activity.

[13] The October 1992 CPS estimates 1.8 adults per household.

[14] The October 1992 CPS estimates 1.06 percent of adults are low-education participants.

- The expected number of adults in the sampled households was 13,348 LUs, 16,388 HPs, and 43,963 HUs.[15] Application of the sampling rates to these three categories resulted in expected initial sample sizes of 2,670 LUs (13,348 x 0.20), 8,194 HPs (16,388 x 0.50) and 8,793 HUs (43,963 x 0.20).

- The expected number of sampled adults per household was about .48 (19,657 LU, HP, and HU adults divided by 41,383 households). It was assumed that about 23 percent (0.48 squared) of the approximately 70 percent of households with more than one adult[16] would have two adults sampled if the restriction had not been imposed. Since one adult per household was to be sampled, the initial sample size was reduced by a factor of 0.82.

- This factor of 0.82 was calculated as follows. The probability of sampling a LU, HP, or HU adult was .27 (19,657 initially sampled LU, HP, and HU adults divided by 73,699 expected LU, HP, or HU adults in the sampled households). If the restriction had not been imposed, 30 percent of the households with one adult would have produced an expected sample size of about 3,352 (41,383 x 0.3 x 0.27). Assuming that households with more than one adult have 2.2 adults per household, the expected sample size for these households was about 17,207 (41,383 x 0.7 x 0.27 x 2.2). Therefore, the total expected sample size if no restrictions were imposed was 20,559. In 70 percent of the households with more than one adult, the probability of sampling adults and the revised sample sizes (selecting one adult) were as follows:

Sampled adults	Probability	Sample size
0	(1-.27) squared = .54	0
1	(1-.54-.07) = .39	41,383 x .39 x .7 = 11,298
2	.27 squared = .07	41,383 x .07 x .7 = 2,028
Total		13,326

- The factor of 0.82 was calculated by adding the revised expected sample size from the households with more than one adult to the expected sample size from the households with one adult and dividing this sum by the original total expected sample size [(13,326+3,352)/20,559]. This factor was applied to the expected number of completes (omitting the LPs) to arrive at the following sample sizes: 790 LPs, 2,189 LUs, 6,719 HPs, and 7,210 HUs.

- These numbers were then adjusted using the switching rate from the NHES:95 Field Test, that is, the percent of persons who changed participation status between the Screener and the extended interview. The switching rate for participants was 10 percent for participants and 22 percent for nonparticipants. For example, for the 790 LPs, 79 cases (10 percent) were subtracted and 482 were added (22 percent of the LNPs), resulting in an expected sample size of 1,193 LPs. Similar adjustments were made to the other groups which resulted in expected sample sizes of 1,786 LUs, 7,633 HPs, and 6,296 HUs.

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[15] The October 1992 CPS estimates 17.92 percent, 22.0 percent, and 59.02 percent of adults are low education nonparticipants, high education participants, and high education nonparticipants, respectively. To arrive at the expected number of adults in each category, the CPS estimate was multiplied times the estimated number of adults in sampled households (e.g., 74,489 x 0.1792 = 13,348 LUs).

[16] The October 1992 CPS estimates that approximately 70 percent of households have more than one adult.

- Finally, the sample sizes were adjusted for nonresponse (88 percent for participants and 85 percent for nonparticipants) to arrive at final sample sizes of 1,050 LPs, 1,518 LUs, 6,717 HPs, and 5,352 HUs, or 7,767 participants and 6,870 nonparticipants.

The actual number of completed interviews was 19,722 adults with 11,713 participants and 8,009 nonparticipants. The differences between the actual and the expected sample sizes were largely the result of differences between the observed rate of participation and the expected rate of participation used in the sample design. The estimate of the participation rate from the CPS was 24 percent, and the observed rate in the NHES:95 was about 44 percent, based on completion result codes. Since completion result codes used for the NHES:95 include full-time, degree-seeking college enrollments, the definition is consistent with the CPS definition of participation. A technical report is being prepared that examines the differences in the participation rates as measured in the CPS and the NHES.[17]

In addition to the differences from the expected participation rates and switching rates, two problems in implementing the sampling also affected the sample yields. Both of these problems were identified within the first two weeks of data collection and eliminated for the interviews completed after that time. The first problem was the incorrect rounding of the number of significant digits for sampling those not involved in adult education and those with high education levels and involved in adult education. As a result of this error, these adults were sampled at a higher rate than planned (e.g., if the desired rate was 0.4, the actual rate was 0.499).

The second problem was more technical. The sampling within the household was accomplished by creating a "measure of size" for the entire household using information on all eligible adults in the household. The "measure of size" was the count of the number of adults in a sampling category multiplied by a weight for each category summed over all 4 categories. The chance for selecting any adult was then intended to be the weight for the person divided by this measure of size. Instead, the product of the number of persons and the weight was used early in the data collection period. As a result, adults were sampled at rates higher than planned. The weighting procedures were adjusted so that adults sampled at these rates were correctly weighted. The main result of both problems was to increase the number of sampled adults early in the collection period.

Sampling for AE Splice

The AE Splice interview was a special study to measure the impact of the questionnaire design on the estimates of participation was included in the NHES:95. Since the NHES:91 and the previous CPS estimates of the number of participants were significantly different from each other, one of the concerns was that the difference was due at least partly to the questionnaires. Since the NHES:95 interview is considerably different from both the NHES:91 and the October 1992 CPS interview, it was decided to include a special methodological study to link the NHES:95 back to the estimates using the NHES:91 interview. Thus, the splice sample was designed to help evaluate the difference in the participation rates as estimated from the NHES:91 and the NHES:95, especially due to the different screening procedures in these surveys.

The splice was a random subsample of the full sample. A random sample of 10,620 telephone numbers was designated for the AE splice sample, and 4,060 of these numbers resulted in completed screening interviews. Assuming 53 percent of the numbers would be residential and a screening response rate of 80 percent, we expected 4,503 completed screeners. The difference was mainly due to a lower than planned screener response rate. Exactly one adult was sampled at random from all of the adults in the sampled households, and the initial questions from the NHES:91 AE component were asked of the sampled person. Assuming a 90 percent completion rate in the 4,060 completed screeners, the expected number of completed splice AE interviews was 3,654. The actual number of completed splice interviews was 3,569.

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[17] Brick, J.M., Collins, M.A., and Kim, K. (1996). *Measuring Participation in Adult Education.* NCES Technical Report 97-341. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

1995 National Household Education Survey Data Collection

Introduction

This section describes the 1995 National Household Education Survey (NHES:95) data collection experience. Included are discussions of supervisor and interviewer training, data collection procedures and their results, special data collection activities such as refielding cases, and data quality control.

Supervisor/Interviewer Staff Training

A series of training sessions was held to prepare supervisors and interviewers for NHES:95 data collection. Training materials were prepared by project staff members and included an interviewer's manual, lecture material, interactive scripts presenting interview concepts and definitions, exercises to reinforce important concepts, and dyad role play scripts.

Project staff trained six trainers on December 12 and 13, 1994. As a result of comments and questions from the trainers, some changes were made in training scripts. Telephone Research Center (TRC) supervisors were trained on December 19 and 20. Two supervisor training programs were held. One was held in Rockville, Maryland and attended by supervisors from the Twelve Oaks and Frederick TRCs. A separate training program was held at the Oceanside, California center. The TRC trainers conducted these training sessions for the most part, with project staff present to respond to any questions that arose.

Most interviewer training was conducted from December 27, 1994 through January 11, 1995 by supervisors and trainers in all three TRC locations (Rockville, MD; Frederick, MD; and Oceanside, CA). Two additional groups of interviewers were later added, and these groups were trained January 21 through 23. Based on experience with the previous NHES surveys and other similar surveys, 16 hours of training were allocated for each experienced interviewer training group (that is, those experienced in conducting random-digit-dial CATI surveys) and 20 hours of training were provided for each new interviewer training group.

The goal of training was to make interviewers knowledgeable about the NHES:95 survey instruments and efficient at collecting information from respondents. This included familiarizing interviewers with the questions asked in the Screener and the two extended components, the flow of the interviews, and using the CATI system. Training activities included interactive and role-play scripts. Interactive scripts were delivered in lecture format, with the trainer acting as the respondent and the interviewers asking the questions. In addition, the trainer would take time to explain or define concepts pertinent to the NHES:95 interviews, or to ask an interviewer to read a definition or procedure from the interviewer's manual. Role-play scripts contained more practice interviews and were conducted by pairs of interviewers at actual interviewing stations. The role play scripts were used to reinforce training concepts, to provide interviewers with the opportunity to practice the interviews, and to provide trainers and supervisors with an opportunity to monitor the interviewers conducting whole interviews.

Exercises were used in addition to the scripts to reinforce some concepts. A pair of exercises concerning those eligible to be counted as care providers was administered. In addition, two exercises concerned with recording appropriate course names were also done.

The training program was divided into 4-hour sessions. Evening training periods included one session, and weekend training periods included two sessions. The first session of training for experienced interviewers focused on the administration of the Basic Screener, the first interactive script (an ECPP interview), an enumeration exercise, a care arrangement exercise, and respondent questions. The second session included two interactive scripts (including both the AE and ECPP interviews) and activities concerning contact procedures. The third session included training on refusal avoidance, interactive scripts covering the Splice questionnaire and an Adult Education interview (restarted), an interactive script for a household with multiple interviews, and two role plays. The fourth session of training included three role play interviews, a review of respondent questions, and exercises for recording course names and subjects for the AE interview and care providers for the ECPP interview.

For new interviewer groups (including new interviewers and those with interviewing experience who had never worked on a household RDD study), the training schedule was identical to that for experienced interviewers as far as content; however, more time was allowed in the schedule for new interviewers to complete the training sessions (see attachment 1 for the full training agendas for both the experienced and new interviewers). It should be noted that all interviewers reviewed possible respondent questions at two separate points in the training program. From past experience, it has been found that one of the most difficult tasks for interviewers in the first weeks of data collection is answering respondent questions. It was for this reason that trainees were given multiple opportunities to practice answering respondent questions during the training sessions, and were also supplied with a set of potential respondent questions and appropriate answers printed on card-stock paper to review on their own and keep in their interviewing carrels.

Altogether, five groups of interviewers were trained at the Maryland TRCs, four groups at the Twelve Oaks TRC, and one group at the Frederick TRC. Three groups of interviewers were trained at the Oceanside TRC. Generally, there were 25 to 35 participants in each training group. In total, 289 interviewers completed training and did some interviewing for the NHES:95.

Spanish Interviewer Training

Sixteen interviewers were bilingual in English and Spanish. These bilingual interviewers were located at the Oceanside TRC and received the same English training as other interviewers on January 21 through 23, plus one additional training session on January 24 that focused on the Spanish versions of NHES:95 CATI instruments. During this additional day of training, the bilingual interviewers completed role plays and participated in interactive scripts in Spanish with their bilingual trainer. All of the CATI screens were translated into Spanish, and these screens were available to bilingual interviewers at a keystroke during interviewing.

Expanded Screener Training

Nineteen interviewers were trained to conduct the Expanded Screener that was tested in the NHES:95. These interviewers were selected to represent a range of interviewers, not just those with the highest cooperation rates. Training sessions were held at the Twelve Oaks TRC on January 23 and 31, and February 9. The Expanded Screener training lasted about 1 hour and included three interactive scripts. By the time interviewers were trained on the Expanded Screener, they already had experience conducting NHES:95 Basic Screeners with actual respondents. Thus, the training sessions focused on the sections unique to the Expanded Screener, specifically, the "control card" items and the public library use items. The various versions of the Expanded Screener that would be tested were also explained, so that the interviewers would not be confused by seeing different sets of questions at different times.

Refusal Avoidance Meetings

Beginning about 2 weeks after the start of data collection, trainers at each of the TRCs held refusal avoidance meetings with interviewers. These sessions focused on information about obtaining respondent cooperation, similar to the information provided in the project training for interviewers. In addition, specific objections or questions posed by respondents, and ways of addressing them, were discussed with the interviewers.

Refusal Conversion Training

All interviewers were given strategies on how to avoid refusals during the regular project training sessions and in the refusal avoidance meetings. In addition, supervisors selected experienced interviewers with higher than average cooperation rates in either the Screener, the extended interviews, or both to be trained for refusal conversion activities. Refusal conversion refers to the process of trying to gain the cooperation of respondents who initially refused to participate in the survey. The refusal conversion training lasted approximately one and one-half hours and covered specific strategies on how to persuade respondents to complete an interview, common reasons for refusals, reasons specific to the NHES:95 for refusal, the importance of addressing people's concerns, and appropriate responses to respondents' concerns. The session was interactive with the interviewers helping one another with strategies for handling specific cases. During the second half of data collection, when the amount of new work to be done was relatively low compared to the amount of conversion work to be done, additional groups of interviewers were trained in refusal conversion. By the last 3 weeks of data collection, virtually all NHES interviewers still on the study (about 9 out of 10) had been trained in refusal conversion.

Data Collection Procedures

Data for the NHES:95 were collected by telephone interviewers from January 3 through April 24, 1995. Screening of households ended on April 9, extended interviews were stopped on April 13, and reinterviews ended on April 24.

Often, contact at a telephone number is made on the first or second attempt, and the case is finalized as a complete interview or is identified as nonworking or nonresidential. In the NHES:95, about 54 percent of completed Screeners (n = 24,386 out of 45,465), 92 percent of nonworking (NW) Screener numbers (35,033 out of 38,143), and 67 percent of nonresidential (NR) Screener numbers (10,671 out of 15,986) were finalized in one or two calls.

The CATI system scheduled cases for telephone calls automatically. The system assigned cases to interviewers in the following order of priority:

- Cases that had specific appointments;
- Cases that had unspecified appointments/general callback times;
- Cases that were busy signals on previous attempts in the same time period (these came up 15 minutes after the first busy signal and, if still busy, 15 minutes after that);
- Interim cases that had been attempted with no contact in other time periods; and
- Cases that were new and had never been worked.

For cases in which call attempts resulted in no answer, an answering machine, a callback, or another non-problem status, interviewers made at least seven attempts to screen households in order to complete the screening and determine whether any household members were sampled for interviews.

These calls were staggered on different days of the week and at different times of the day over a period of at least 2 weeks, including at least two daytime calls, three evening calls, and two weekend calls. Nearly all cases for which this initial seven-call limit was reached were later refielded for additional attempts (discussed in a later section).

Cases that were classified as refusals were placed in a holding queue for later conversion attempts by interviewers who had been selected for, and received, refusal conversion training. Cases that were coded as a problem were referred to a telephone supervisor to discuss appropriate methods of completing an interview.

When the person answering the telephone was not able to speak English, and the interviewer was not bilingual and was not able to identify an English-speaking household member, the interviewer coded the case as a "language problem" and further specified the case as either "hearing/speech problem," "Spanish," or "language other than English or Spanish." Cases coded as language problems were placed in a special queue so that bilingual interviewers were the only ones who could access the non-English "language problem" cases for followup. On the other hand, if a bilingual interviewer encountered a Spanish-speaking respondent on an initial call, the interviewer could immediately begin to conduct the interview in Spanish without ever coding the case as a language problem. Language problems classified as "hearing/speech problems" were handled by interviewers trained in refusal conversion. (Additional information on the number and disposition of language problem cases is provided in the "Unit Response Rates" section of *Unit and Item Response Rates, Weighting, and Imputation Procedures*[18].)

When an interviewer dialed a number at which no contact with a household member had been made, and reached an answering machine, the CATI system displayed an answering machine message to be read by the interviewer. This message was as follows:

> *This is {interviewer name} calling from Westat, a research firm conducting a study for the U.S. Department of Education about the educational experiences of adults and children. We would like to speak with you about these topics. Your cooperation is important since your phone number was randomly selected to represent many households. All of your answers will be kept confidential. We will call back within the next few days. Thank you.*

If the message was successfully left (as indicated by the interviewer), it was not displayed again for that case. The NHES:95 was the first NHES survey year in which a message was left on answering machines. In about 14 percent of both Screener cases (n=17,207) and extended interview cases (n=6,183) an answering machine was reached at some time. The percentage of Screener cases finalized as having only reached answering machines was only 2 percent (n=1,443). This percentage is the same as that observed in the NHES:93.

During the last three weeks of data collection, answering machine messages were again left when machines were reached on contact attempts. Because the CATI system was not structured to accommodate this activity, an "answering machine day" was scheduled one day each week, and the text of the message was provided to interviewers on a card to keep with them at their interviewing station. In addition to noting the purpose of the call and the sponsorship of the study, the NHES toll-free telephone number was also given.

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[18] Brick and Broene, op.cit.

Given these general data collection procedures, some figures on the progress made in completing cases over the data collection period are presented next. Following is a discussion of some special data collection procedures that were used to maximize response rates for the NHES:95.

Weekly Progress in Completing Cases

Table 1 shows data collection progress by week. Included in this presentation are the numbers of Screeners and extended interviews completed each week, the number of interviewer hours each week, and the number of interviewer hours per completed interview, a commonly used measure of interviewing productivity. (Note that table 1 does not include reinterviews, which are addressed below.)

Table 1.–Weekly progress in completing cases in the NHES:95

Week	Week ending	Screeners Completed	Extendeds Completed	Interviewer Hours	Hours per Complete
1	January 8	1,674	1,235	883	0.71
2	January 15	5,889	4,804	3,125	0.65
3	January 22	4,716	3,899	3,145	0.81
4	January 29	5,528	4,162	3,706	0.89
5	February 5	5,362	3,937	3,416	0.87
6	February 12	5,396	4,000	3,335	0.83
7	February 19	5,313	3,879	3,216	0.83
8	February 26	3,776	3,364	2,969	0.88
9	March 5	1,821	1,728	2,264	1.31
10	March 12	2,281	1,929	2,219	1.15
11	March 19	1,174	996	1,257	1.26
12	March 26	1,110	995	1,327	1.33
13	April 2	895	904	1,189	1.32
14	April 9	686	728	1,101	1.55
15	April 16	7	549	638	1.16
16	April 23	0	9	7	0.64
	Total	45,628	37,118	33,797	0.91

NOTE: Hours per completed interview equals the number of interviewer labor hours divided by the number of completed extended interviews. Screeners completed after April 9 and extended interviews completed after April 13 reflect the resolution of problem cases and not continued interviewing. Some Screeners were removed from completed status as a result of problem sheet resolution (e.g., nonresidential number or ineligible Screener respondent.)

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

About half of the total number of Screeners (or 23,169 out of 45,523) were completed during the first 5 weeks of the data collection period, that is, by February 5. About three-fourths of the completed Screeners (33,878) were done by February 19, the seventh week of data collection. The number of Screeners completed each week was much lower after that point, reflecting the greater difficulty of completing Screeners with the outstanding cases. The Screener cases remaining at this stage of data collection included large numbers of persistent answering machine cases, refusal conversion cases, and refielded maximum call cases.

About half of the extended interviews were also completed by February 5, that is, 18,037 out of 37,120 extended interviews. About three-fourths of extended interviews were completed by the middle of the seventh week of data collection (the week ending February 19). These benchmarks parallel the findings for the Screener, discussed above.

The amount of interviewer labor hours for completed extended interviews is shown in the last column of the table. During the first eight weeks of data collection, the time per completed interview was between 0.7 and 0.9 hours per completed extended interview. After that time (i.e., after February 26) the hours per completed extended interview rose and ranged from 1.2 to about 1.5 hours per completed interview for the remainder of the data collection period, with the exception of the last week. As noted above, easier-to-reach and more cooperative cases are completed relatively early in the data collection period, and much effort is expended on the last fourth or so of the completed cases.

Special Data Collection Procedures

The NHES:95 included a number of procedures designed to maximize the survey response rate. Since most nonresponse in a random digit dialing (RDD) survey occurs at the screening level, these procedures emphasized increasing the Screener response rate. The approaches used included refusal conversion attempts for all Screener interviews except those coded as hostile; refielding Screeners that had a final status of maximum calls or no answer; additional attempts on Screener cases that had twice been coded as language problems; selective refielding of cases that had received two refusals; and a mailing of letters encouraging participation in the study. At the extended level, refusal conversion was also conducted (although cases receiving two refusals were not refielded), maximum call cases were also refielded, and letters were also mailed to encourage participation.

Refusal Conversion

As a matter of standard practice, an initial refusal case is attempted again after a period of time (generally, 2 weeks), regardless of the type of interview (i.e., Screener or extended). Exceptions are cases in which the interviewer states that the respondent was hostile, meaning threatening, abusive, or profane; these cases are not refielded. Interviewers specially trained for refusal conversions are assigned to call the eligible refusal cases again and attempt to complete the interview. In the case of a Screener, another household member may answer the telephone and complete the Screener; in other cases, an effort must be made to convert the person who originally refused to be a respondent.

Classification of Refusals. Whenever an interviewer received a refusal, information about the case was added to a CATI database segment specifically for noninterview cases. The information included a rating of the refusal as "mild," "firm," or "hostile." These ratings were, of course, subjective assessments by the interviewer. In many of the refusal cases, interviewers encountered situations where the person would hang up the telephone without saying anything, other than having said "hello" when answering the telephone. In these instances, the interviewers were instructed to code the case a "mild" refusal. If a refusal was coded as hostile, it was reviewed by a supervisor, who would determine whether the "hostile" designation was warranted. If the supervisor did not concur with the "hostile" code, the case was released for a conversion attempt.

Refielding Refusals. As in the NHES:91 and the NHES:93, efforts to increase Screener response involved the refielding of some of the cases that had received a second refusal on the conversion attempt. Screener refusals that were coded as mild or firm for the two previous refusals were considered eligible for refielding. No Screener that had been coded as hostile was released for an additional conversion attempt.

Screeners. Table 2 shows the results of refusal conversion efforts at the Screener level. In the first column, the results of the standard refusal conversion approach (one conversion attempt) are shown. The total number of cases that received a refusal was 23,412; 7,521 interviews were completed as a result of the first round conversion approach. The conversion rate for these Screeners was about 34 percent, lower than would be expected from previous NHES collections. For instance, the refusal conversion rate for the NHES:91 which contained the same topical components as the NHES:95 was 47 percent. This lower NHES:95 conversion rate is consistent with the relatively low initial Screener cooperation rate also obtained for the NHES:95 (discussed below).

Table 2.--Results of refusal conversion at the Screener level in the NHES:95

Final Result	Standard procedure (One conversion attempt)		Refielded refusals (Additional conversion attempt)	
	Number	Percent	Number	Percent
Complete	7,521	34	2,310	21
Refusal	13,659	61	8,818	78
Other nonresponse	1,131	5	114	1
Ineligible (e.g., nonresidential)	1,101	--	255	--
Total	23,412	100	11,497	100

NOTE: Ineligible cases are those found to be nonresidential during refielding attempts. These cases are excluded from the calculation of percents. Other nonresponse includes language problems, and problem cases that could not be resolved during data collection (e.g., household members away for an extended period). Percents may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Of the cases that resulted in second refusals, 11,497 were refielded for an additional conversion attempt. These included only those cases for which neither the first nor the second refusal received a code of "hostile." This effort resulted in the completion of 2,310 additional Screeners, about 21 percent of the refielded refusal cases, and about 5 percent of all completed Screeners. The overall Screener conversion rate for the NHES:95 is 42 percent; that is, 9,831 Screeners were completed out of 23,412 cases that had ever refused. This rate is lower than the overall Screener conversion rates for the NHES:91 (56 percent) and the NHES:93 (59 percent).

The rates of refusal in the NHES:95 were higher than in previous NHES collections. The NHES:91, which included the same two survey components, experienced an initial cooperation rate of 67 percent (the initial cooperation rate is the number of completed cases divided by the sum of completed and refused cases). By comparison, the initial cooperation rate for the Basic Screener in the NHES:95 was 61 percent. Discussions with telephone center supervisors and monitors and project staff did not suggest specific reasons for the lower rate, nor did a review of the non-interview report form (NIRF) CATI screens for a sample of cases.

Tabulations during data collection revealed that most Screener-level breakoffs (more than 80 percent) occurred prior to the matrix, so full enumeration of households, by itself, may not account for the high refusal rate. Anecdotal information from TRC staff indicate that many respondents hung up without listening to the entire introduction, so that they often did not know what it was that they were refusing. Among the final refusal cases at the Screener level (n = 11,932), 10,286 (or 86 percent) of the cases were broken off at the introductory screen. Another 669 cases (6 percent) were broken off at other early screens, such as the screen at which the interviewer asks to speak with a household member who is at least 18, or asks to speak with a male or female head of household. Only 8 percent of final refusal cases (n = 954) occurred at the enumeration matrix.

Extended Interviews. Table 3 shows the results of refusal conversion efforts at the extended interview level. Note that only one conversion attempt was made for extended level interviews. The refusal conversion rates for the extended interviews are typically lower than the Screener rates. Refusals at the extended level tend to be more firm than those at the Screener level. Initial refusal respondents who have completed Screeners (or who live in the household where someone else has) know more about the study and have made a choice not to respond. At the screener level, many initial refusals result from a misunderstanding of the intent of the call and refusals may be converted if the respondent listens to an explanation. Also, with extended interviews, the same person must be converted, while other adult household members can respond to the Screener. Among cases that ever refused at the extended level, 60 percent were ever coded firm or hostile; among cases ever refusing at the Screener level, 54 percent were ever coded firm or hostile.

Table 3.--Results of refusal conversion efforts at the extended interview level in the NHES:95

Final Result	ECPP		AE		Splice	
	No.	Pct	No.	Pct	No.	Pct
Complete or ineligible	543	33	1,292	30	181	37
Refusal	1,036	63	2,873	66	292	59
Other nonresponse	62	4	178	4	22	4
Ineligible telephone number	1	--	6	--	--	--
Total	1,642	100	4,349	100	495	100

Note: Ineligible telephone number cases are those found to be nonresidential during refielding attempts. These cases are excluded from the calculation of percents. Other nonresponse includes language problems, maximum call cases, and problem cases that could not be resolved during data collection (e.g., household members away for an extended period). Percents may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Among the ECPP interviews, 1,642 were ever coded as refusals. Of these, 543 were finalized successfully, including 536 completed interviews and 7 confirmed ineligible. This results in a conversion rate of 33 percent for ECPP cases, virtually the same as the initial conversion rate for the Screeners. Among the AE interviews, 4,349 cases were ever coded as refusals, and 495 cases were ever refusals among the AE Splice interviews. Among these interviews, 30 percent of the AE and 37 percent of the AE Splice interviews were converted to final complete or ineligible codes. Again, these percentages are comparable to the initial conversion rate for Screeners. The NHES:95 extended interview refusal conversion rates are similar to those from the NHES:93 (33 and 32 percent for the School Readiness and School Safety and Discipline interviews, respectively) and the NHES:91 Early Childhood interview (31 percent) but lower than that for the NHES:91 Adult Education interview (52 percent for adult education participants and 47 percent for nonparticipants). Thus, unlike NHES:95 Screener refusal conversion rates, the rate of refusal conversion at the extended level was on par with previous NHES studies, at least for parent interviews.

Refielding Other Nonresponse Cases

Maximum Call Cases. As noted above, at least seven attempts were made to complete a Screener at each telephone number sampled for the NHES except for hostile refusals or language problem cases. In cases where a household member had actually been spoken with (i.e., this does not include contact with answering machines), but no Screener had been completed by the time the maximum number of calls was reached, the cases were coded as "maximum call" cases. The maximum call cases were refielded periodically during the data collection period. A CATI utility developed for this purpose permitted the release of "fresh" maximum call cases (i.e., those that had not been released previously) or the release of all maximum call cases.

Initially, only "fresh" cases were released, and then, as the end of the data collection period neared, all cases were released for additional attempts. On the Friday before the end of screening (April 7), all Screener maximum call cases were released. On the Monday prior to the end of extended interview data collection (April 10) all extended interview maximum call cases were released. For all Screener releases but the last one, the number of additional calls specified was four. For the last Screener release (April 7), four calls were specified for "fresh" maximum call cases, and two calls were specified for other cases. For extended interview refields, four calls were also specified, with the exception of the last night of data collection. In the final release for extended interviews, 10 calls were specified so that cases could continue to be worked without returning to the maximum call queue.

Table 4 shows the results of refielding the maximum call cases at the Screener level. A total of 5,016 maximum call Screener cases were released. Of these cases, 1,336 (29 percent) resulted in completed Screeners, 1,925 (41 percent) were refused, and 1,226 (26 percent) were finalized as maximum call cases after additional attempts. Among the 181 Expanded Screener maximum call cases, 57 (33 percent) were completed, 62 (35 percent) were refused, and 51 (29 percent) were finalized as maximum call cases. Other final statuses were less common, and are shown in the table. Figures from the NHES:91 and the NHES:93 are available for comparison. In the NHES:91, 38 percent of refielded maximum call Screeners were completed; in the NHES:93, 20 percent were completed.

Table 4.--Results of refielding maximum call Screener cases in the NHES:95

Final Result	Screener		Expanded Screener	
	Number	Percent	Number	Percent
Complete	1,336	29	57	33
Refusal	1,925	41	62	35
Maximum call	1,226	26	51	29
Other nonresponse	207	4	5	3
Ineligible telephone number	322	--	6	--
Total	5,016	100	181	100

NOTE: Ineligible telephone numbers are those found to be nonresidential during refielding attempts. These cases are excluded from the calculation of percents. Other nonresponse includes language problems, and problem cases that could not be resolved during data collection (e.g., household members away for an extended period). Percents may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

As shown in table 5, at the extended interview level, 897 ECPP maximum call cases were released, of which 27 were found to be ineligible telephone numbers. Of the eligible cases, 369 (42 percent) were completed, 275 (32 percent) were refused, and 172 (20 percent) were finalized as maximum call cases. Among the 2,455 AE cases that were refielded, 93 were found to be ineligible telephone numbers. Of the 2,362 eligible cases, 1,032 (44 percent) were completed, 724 (31 percent) were refused, and 462 (20 percent) were finalized as maximum call cases. Among the AE Splice interviews, 183 maximum call cases were refielded, of which 172 were eligible telephone numbers. About half of the eligible Splice maximum call cases were completed (85, or 49 percent), 52 (30 percent) were refused, and 24 (14 percent) were finalized as maximum call cases. Again, other results were less common and are shown in the table.

No Answer Cases. Another effort to increase the Screener response rate was the release of "no answer" cases for additional attempts. The no answer, or NA, category includes two types of cases. The "pure" NA cases are those numbers at which neither a person nor an answering machine has ever answered the telephone number on any attempt. The "answering machine NA's" are cases in which the telephone has been answered only by an answering machine. The CATI utility that is used to refield these cases treats them as new numbers and releases them for a full round of calls. As a result, nearly all NA cases, except those that entered this status near the end of data collection, received 14 or more calls unless they were completed prior to that number of attempts. Only 62 of the cases finalized as NA's had fewer than 14 calls, and all of those had 10 or more calls. (Following survey closeout, the "pure" NA's and the answering machine NA's were separated into two categories.)

The refielding of "pure" NA cases is not a typical approach in the NHES, but was done for two reasons. The primary reason was Screener response problems in the NHES:95. In addition, a new CATI logical switch allows a choice of having both weekend attempts on the same weekend versus two different weekends. Whereas the NHES protocol has always called for attempts on two different weekends, the

Table 5.--Results of refielded maximum call cases at the extended interview level in the NHES:95

Final Result	ECPP		AE		Splice	
	No.	Pct.	No.	Pct.	No.	Pct.
Complete or ineligible	369	42	1,032	44	85	49
Refusal	275	32	724	31	52	30
Maximum call	172	20	462	20	24	14
Other nonresponse	54	6	144	6	11	6
Ineligible telephone number	27	--	93	--	11	--
Total	897	100	2,455	100	183	100

NOTE: Ineligible household telephone numbers are those found to be nonresidential during refielding attempts. These cases are excluded from the calculation of percents. Other nonresponse includes language problems, and problem cases that could not be resolved during data collection (e.g., household members away for an extended period), and adult who were ill or not competent to answer the survey (e.g., mentally retarded). Percents may not sum to 100 due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

logic was initially set to allow both of these calls on the same weekend. For that subset of NA cases, another weekend call was needed in any case.

Table 6 shows the results of refielding the Screener NA cases for "pure" NA's and for answering machine NA's. An important result of the refielding of the "pure" NA cases is that 897 ineligible telephone numbers (nonworking or nonresidential) were identified. Of the 5,288 numbers presumed to be eligible, the great majority were finalized as "pure" NA cases (4,561, or 86 percent). An additional 388 cases were completed, and 191 refused.

The yield in completed cases from the answering machine NA cases is quite different. About half of these cases remained in answering machine status (51 percent), a substantially lower proportion than the 86 percent of "pure" NA's that remained in the same status. In addition, 31 percent of the refielded answering machine NA's resulted in completed Screeners, compared with only 7 percent of "pure" NA's. The refielding of answering machine NA's also resulted in the identification of 504 numbers as nonworking or nonresidential.

Language Problem Refielding

As noted above, cases that are twice coded as language problems are finalized as language problems. Finalized Screener language problems that were non-English (as opposed to hearing/speech problem cases) were attempted again during the last two weeks of data collection. The purpose of these attempts was to try to identify an adult household member who spoke either English or Spanish. Nearly three-fourths of the 393 cases were again coded as language problems, and only about 10 percent were completed. Other results included refusals, a small number of nonworking or nonresidential numbers and other nonresponse. As a result of the small yield from this activity, we do not recommend this procedure in future collections.

Table 6.--Results of refielding Screener "no answer" cases in the NHES:95

Final Result	"Pure" NA		Answering Machine NA	
	Number	Percent	Number	Percent
Complete	388	7	731	31
Refusal	191	4	304	13
Maximum call	76	1	136	6
No answer, "pure"	4,561	86	0	0
No answer, answering machine	52	1	1,206	51
Other nonresponse	20	<1	9	<1
Ineligible telephone number	897	--	504	--
Total	6,185	100	2,890	100

NOTE: "Pure" NA's are no answer cases for which neither a person nor an answering machine has answered on any attempt. Answering machine NA cases are those that have been answered by machines only on any attempts resulting in contacts. Percents may not sum to 100 due to rounding. Ineligible telephone numbers are nonworking or nonresidential numbers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Respondent Letter

In list sample studies, advance mailings and/or nonrespondent mailings are often used to improve response. Because Screener response was of primary concern in the NHES:95 data collection, it was decided to attempt a nonrespondent mailing for those telephone numbers for which an address could be obtained. On March 1 and 2, a mailing was sent to selected Screener nonresponse cases for which addresses had been obtained through Telematch (a copy of the letter is contained in attachment 3). These included interim Screener cases, *except* those in mailout status[19], language problem status, or telephone problem status, and finalized cases in maximum call, no answer, and refusal status. A second mailing was conducted March 13 for cases that had newly entered one of these eligible statuses. Table 7 shows the results of the Screener mailing effort by the status of the case at the time of mailing.

A higher percentage of cases for which a letter was mailed were completed, compared to cases for which no letter was mailed. Nearly one-third of the mailing cases were completed (31 percent) compared to 17 percent of cases for which no letter was mailed. The results of the NHES:96 field test indicate that those cases for whom addresses cannot be obtained tend to be less likely to respond. Because the NHES:96 was a test of an advance mailing and not a nonresponse mailing, and the NHES:95 does not represent an experimental condition, it is not possible to estimate how much of the difference is attributable to this difference in response propensity, that is, the tendency for higher cooperation rates among cases for which addresses were obtainable.

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[19] Cases in mailout status are those who had indicated they would like to receive a letter explaining the study before they consent to participate. Because the mailout letter was very similar to that developed for the Screener nonresponse cases, it was decided to not send the nonrespondent letter to these cases.

Table 7. -- Results of the Screener nonresponse mailing effort in the NHES:95.

Status at Mailing	*No letter mailed*			*Letter mailed*		
	No.	*Completed*	*Pct.*	*No.*	*Completed*	*Pct.*
Interim Cases						
Ring, no answer	2,410	430	18	1,495	553	37
Initial refusal	1,899	585	31	2,062	845	41
Busy	4	1	25	4	2	50
Callback	717	250	35	710	326	46
Answering machine	1,783	519	29	1,530	623	41
Telephone problem	51	9	18	41	15	37
Subtotal	6,864	1,794	26	5,842	2,364	41
Finalized Cases						
Maximum call	1,047	187	18	657	175	27
No answer	4,913	173	4	1,962	262	13
Refusal/breakoff	2,630	417	16	3,714	1,012	27
Subtotal	8,590	777	9	6,333	1,449	23
Total	15,454	2,571	17	12,175	3,813	31

NOTE: Excluded from this analysis are cases that were completed before possible receipt of a letter. Percents in this table are not intended to sum to 100.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Completion rates were higher for cases to which letters were mailed across all types of cases in interim statuses. However, there is some fluctuation in the extent of the differences. For example, 18 percent of ring, no answer cases that were not in the mailing group were completed, compared to 37 percent of those in the mailing, about twice the rate of completion. Among answering machine cases, 29 percent of the nonmailing group were completed, compared with 41 percent of the mailing group, about one-third more.

Among cases that were in a finalized status at the time of the mailing, completion rates were lower: 9 percent of finalized cases compared to 26 percent of interim cases for the nonmailing group, and 23 percent of finalized cases compared to 41 percent of interim cases for the mailing group. Cases in the mailing group were more likely to be completed for all finalized statuses included in the mailing. Among the finalized cases, we find the poorest rate of completion of any status, that for no answer (NA) cases. As indicated in the discussion of refielding efforts above, the yield for these cases is generally poor.

Some letters were returned as undeliverable. Because the address list was destroyed after the mailing, it is not possible to separate the completion rates for the Postmaster returns and other mailing cases. For a further examination of this issue in the field test of the NHES:96, see *Design, Data Collection, Interview Administration Time and Data Editing in the 1996 National Household Education Survey.*

Extended Interview Nonresponse Letter. In addition to the Screener nonresponse mailing discussed above, a letter was sent to selected extended interview nonrespondents, including cases in interim status (except language problem and other problem cases) and finalized maximum call cases. At the extended interview level, there are no noncontact cases as there are at the Screener level. Cases with second refusals were not included in the extended interview nonresponse mailing. Because the Screener had been completed in these households and the extended interview respondent had subsequently refused twice, a nonresponse mailing to these persons was seen as overly aggressive. A copy of this letter is included as attachment 4.

Addresses were requested from Telematch on March 9 and received on March 10. The mailing took place during the week of March 13. Cases completed before March 17 are excluded from the figures discussed here, to allow for receipt of the letter. Letters were mailed to 1048 households for whom addresses were obtained, representing 911 non-reinterview extended interviews. About 43 percent (n = 394) of these extended interviews were completed. Most that were not completed were finalized as refusals (n = 334) or maximum calls (n = 122). The cases for which addresses were sought but not obtained represent 1,072 extended interviews. Of these, 37 percent (n = 398) were completed and most of the remainder were finalized as refusals (n = 380) or maximum calls (n = 189).

Given the greater propensity to respond (i.e., higher cooperation rate) among persons for whom addresses could be obtained, and a response differential of only 6 percent, it does not seem reasonable to conclude that the letter helped increase extended interview response. Anecdotal information from interviewers also indicated that they did not believe that the extended interview letter was having much effect on respondents.

Item Clarification Callbacks

During data collection some data problems were discovered that required calling households back to clarify some information that had been provided by respondents. For each of these problems, the households were called back, the questions were administered, and the data were corrected. These problems are discussed below.

- Eighty-two households were reached to determine the name, age, sex, school enrolment status, highest education attainment and military status (for adults), and home school status and current grade (for children) for omitted household members (see following section, Problem Areas and Suggestions for Improvements in Future Surveys, Item 1). This recontact effort resulted in the sampling of ten persons for extended interviews.

- Two hundred eighty sampled adults who became ineligible because they were in the military (the "IAs") were called back to verify that they were currently serving in the U.S. Armed Forces, not including the Reserves or National Guard. In 180 of these cases, it was confirmed (by the sampled respondent or by another adult household member) that the sampled adult was on active duty in the U.S. Armed Forces and the interview disposition code remained "IA." In 79 of these cases, it was determined that the selected respondent was not currently serving on active duty in the U.S. Armed Forces. In these situations, the AE interview was administered to the sampled adult. In four cases, it was determined that the sampled adult was not a household member. This person was deleted from the household and any dependent data values updated. In 17 cases, recontact could not be established and the interview disposition code remained "IA."

- Prior to the inclusion of a new home schooling edit on January 24, 17 ECPP respondents indicated that the sampled child was being homeschooled, but reported "only school" when asked the schooling situation for the child's current grade equivalent. These households were called back and the questions re-administered.

- Arrangements collected at CATI screens N23 (MOMCARE) and N25 (MOMCARWH) of the ECPP interview required review, data cleaning, and creation of RELA, NREL, and CENT segments (see Problem Areas and Suggestions for Improvements in Future Surveys, Item 3, in the Data Editing section of this report). In cases where information collected at these items was ambiguous (about 40 cases) respondents were called back to confirm the child's care arrangement situation to determine how it should be recoded.

- Two hundred fifty-nine adults who completed the Splice interview were successfully recontacted and asked question B4, "Do you have a high school diploma or its equivalent, such as a GED?" This was necessary due to an incorrectly programmed skip pattern in the CATI instrument (which was corrected during the second week of data collection).

Data Quality Control and Monitoring

Several methods were used to ensure the quality of the data collected in the NHES:95. These methods included cognitive laboratory activities, CATI testing, field testing, interviewer monitoring, a blind AE reinterview, and on-line help screens. The procedures used, beginning with cognitive laboratory activities, are described below.

Cognitive Laboratory Activities

In the design phase of the NHES:95, extensive cognitive laboratory research was done to provide a general evaluation of each survey component and to examine some specific measurement issues. This research consisted of multiple rounds of both individual interviews and focus groups to evaluate both the AE and ECPP survey instruments. Based on the findings from initial rounds of activities, revised questionnaire instruments were tested in subsequent rounds, and then all revisions to the instruments were implemented in the CATI system. For a more complete discussion of the cognitive laboratory procedures typically used in the NHES, see *Use of Cognitive Laboratories and Recorded Interviews in the National Household Education Survey*[20].

CATI Testing

Data collection quality control efforts continued during the CATI development period. As the CATI system was programmed, extensive testing of the system was conducted. This testing included review by project research staff, telephone interviewing staff, data preparation staff, statistical staff, and the programmers themselves. The testing by staff members representing different aspects of the project was done to ensure that the system was working properly from all of these perspectives.

Field Testing

The NHES:95 was tested in a multi-phase field test during the spring and summer of 1994. Phase 1 of the field test was conducted from March 31 through April 6, 1994. In Phase 1, 759 interviews were completed for the ECPP component, and 109 participant interviews and 11 nonparticipant interviews were completed for the AE component. Based on the results of monitoring the interviews and data on interview administration time, the AE interviewing was terminated early. Several problems were identified with the flow and length of the interview, indicating that further interviews at that time would not be useful.

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[20] M.J. Nolin and K. Chandler. (1996). *Use of Cognitive Laboratories and Recorded Interviews in the National Household Education Survey*. NCES Publication No. 96-332. Washington DC: U.S. Department of Education, National Center for Education Statistics.

Revisions were made to the CATI instruments based upon Phase 1 field test findings, and Phase 2 was conducted with the revised instruments from June 10 through 13. There were 99 AE interviews completed, including 63 participants and 33 nonparticipants. For the ECPP component, 111 interviews were completed during Phase 2. A third phase of field testing was conducted on July 8 and 9, to briefly test a few final revisions to the AE instrument. Fifty-four interviews were completed for the AE component in Phase 3.

Interviewer Monitoring

Throughout data collection, supervisors and telephone monitors (experienced telephone interviewers who were trained for monitoring) monitored the interviews by listening for about 15 minutes at a time to the interviewers from either a monitoring room or from a supervisor station on the floor of the telephone center. Project staff also monitored the interviewers, more heavily during the beginning of data collection and less frequently as collection progressed.

The monitoring form that was used by supervisors is attached (attachment 2). The monitor completed a special monitoring form that covered five major areas of telephone interviewing:

- Reading and general skills;
- Listening skills and probing;
- Recording;
- Handling refusals and questions; and
- Telephone manner and relationship with respondent.

The monitors recorded their assessments of the interviewers' skills and abilities for 22 items within these five major areas using three categories: "no problem," "minor difficulty," and "major difficulty." If a skill was not rated during the monitoring session, a not applicable (N/A) code was used. The forms were shared with the interviewers, who signed the forms indicating that they had reviewed the supervisor's assessment of their performance.

Weekly reports were provided to NCES showing the number of monitoring forms completed and the number of forms that contained a "major difficulty." In all, 5,138 monitoring forms were completed for the NHES:95; of these 149 (3 percent) contained a "major difficulty." As might be expected, this percentage was higher during the first month of data collection as interviewers completed training and started work on the project, and lowest during the last month. Only 6 of the 1,661 forms completed from the week ending March 5 through the end of the study contained a major difficulty (table 8).

In addition to monitoring, at least once each week, the CATI management system produced computer-generated reports that displayed response rates, refusal rates, and refusal conversion rates for each NHES:95 interviewer. These reports assisted telephone center supervisors in identifying interviewer performance problems that might not be detected through monitoring. For example, interviewers with low cooperation rates were assigned to attend additional refusal avoidance training.

Table 8.--Numbers of monitoring sheets and number of sheets showing a "major difficulty" for the NHES:95, by week.

Week	Week Ending	Sheets with Major Difficulty	Total Sheets
1	January 8	7	*(see NOTE)*
2	January 15	24	571
3	January 22	14	345
4	January 29	27	564
5	February 5	31	534
6	February 12	17	464
7	February 19	11	495
8	February 26	12	504
9	March 5	5	420
10	March 12	0	334
11	March 19	1	262
12	March 26	0	256
13	April 2	0	181
14	April 9	0	151
15	April 16	0	57
Total		149	5,138

NOTE: Because of delay in the key entry of the first week's monitoring forms, the monitoring database shows the sheets for weeks 1 and 2 as being done in week 2.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Reinterview Program

A blind reinterview program was instituted for the Adult Education component of the NHES:95 (the early childhood components in the NHES:91 and the NHES:93 had reinterview programs, and there was little benefit to conducting additional early childhood reinterviews in the NHES:95). A random sample of respondents who had already completed the AE survey was called and re-administered a subsample of items from the original interview to check item reliability. The purposes of the reinterview were to:

- Identify survey items that were not reliable;
- Quantify the magnitude of the response variance for groups of items collected from the same respondent at two different times; and
- Provide feedback to improve the design of questionnaire items for future surveys.

A random sample of completed interviews was selected for reinterviews. Only interviews that had never been coded a refusal and that had been conducted in English were eligible. In order to limit the burden placed on the respondent, only a subset of items was included in the reinterview and only one reinterview per household was conducted. The respondent was recontacted about 2 weeks after the initial interview.

The reinterviews for the NHES:95 were conducted using the CATI system, which provided an opportunity to control interviewer access to earlier responses. After the entire reinterview was conducted, the CATI system produced a series of edit check screens to resolve differences between responses from the initial interview and the reinterview for certain items (primarily those associated with participation in AE). The edit check screens were used to indicate to the interviewer that two different responses had been recorded for the item, without informing the interviewer or the respondent about which response was recorded in which interview. The respondent was then asked which was the "best" answer.

Interviewers at the Frederick TRC who were currently working on the NHES:95 were trained to conduct the reinterviews. There were 1109 reinterviews completed, ending on April 24. A more complete report on the procedures, response rates, and results of the reinterview program are discussed in *The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component*[21].

On-Line Help Screens

The question-by-question (QxQ) specifications that are provided in the interviewer's manual were also included in the CATI system. There was a QxQ specification for each question, or CATI screen. By pressing a specific key, interviewers could see the QxQ specification for the CATI screen he/she was viewing at the time. Prior to the NHES:95, we did not have any quantitative information on how often the on-line help was accessed during data collection. However, we now have a count of the numbers of times the help screens were called up for each item. Relative to the large number of completed interviews, the number of times the help screens were called up is very small. The total number of help screens available was 503. Of this total, 121 were never accessed. Of the help screens actually used, 260 were accessed 10 or fewer times, 66 were accessed 11 to 24 times, and 56 were called up 25 or more times.

Table 9 provides a summary of help screens used 25 times or more during interviews. These data represent help screens accessed for all cases, not just for the interviews that were ultimately completed. Help-screens that were used most often tended to be associated with specific concepts or terms that would conceivably be unfamiliar to some respondents (e.g., for AE: certification and licensure, computer/video instruction, apprenticeship; for ECPP: participation in Head Start, types of disabilities).

Summary

The 1995 National Household Education Survey data collection was conducted from January 3rd through April 24, 1995. During this period, 45,465 Screeners, most of the 37,355 extended interviews, and 1,109 reinterviews were completed.

The NHES:95 data collection experience was similar to previous NHES collections in many ways, but was strikingly different in the level of Screener response. Full enumeration had not been used in the NHES collection since the 1989 Field Test, and it was anticipated that there might be somewhat more difficulty with response than in the NHES:91 or the NHES:93. However, the cooperation of respondents was lower than had been experienced in the 1989 Field Test as well.

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[21] Brick, Wernimont, and Montes, op cit.

As a result of the lower response rate, activities were undertaken in the NHES:95 that had not been used in previous collections. These strategies included nonresponse mailings at the Screener and extended interview levels, refielding of noncontact ("pure" NA) Screener cases, and additional attempts to obtain a response to Screener cases that had twice been coded as non-English language problems. Each of these efforts is documented in this report, along with the more standard procedures that have been used in NHES collections.

Further information about unit response in the NHES:95 is available in another NCES Working Paper entitled *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey*[22].

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[22] Brick and Broene, op cit.

Table 9.--Numbers of times NHES:95 CATI help screens were accessed, by item*

CATI Screen	Item	Times help accessed
Screener		
SINTRO	Introduction	173
S7	School enrollment status	53
Adult Education		
AA3OV3	Vocational diploma/AA degree	41
AA6	Complete HS through GED	56
AA7/AA7OV	Work for pay last 12 months	73
AD1	Participant in credential program	99
AD2	Number of credential programs	52
AD3/AD3OV	Type of credential program	40
AD7	Months enrolled full time in credential	40
AD8	Months enrolled part time in credential	87
AD12	Hours per week while full time	57
AD13	Amount paid for credential program	90
AE1	Participate in apprenticeship	109
AF1	Participate in work-related	65
AF3	Number of work-related courses	60
AF4	Work-related course names	50
AF14OV	Work-related Provider name	25
AF19	Employer support through union	70
AF21	Other work related courses in past year	34
AF25	Employer offer career/job-related courses	53
AG1	Participate in other formal courses	34
AI1	Computer/video instruction	174
AI3	Number of computer/video courses	81
AI5	Hours spent on computer/video courses	45
AJ3	Hispanic origin	73
AJ11	Certification or licensure	290
AJ12	Type of license	217
AJ20	How long worked for employer	48
AJ26	Hours per week work for pay	31
AJ28	Amount adult earns	39
AJ34	Requirement for continuing education	201
AJ35	Member of union or employee association	28
ASUPP_1	Name of company that provided support	28

Table 9.--Numbers of times NHES:95 CATI help screens were accessed, by item--Continued

CATI Screen	Item	Times help accessed
Early Childhood Program Participation		
CA4	Hispanic origin	66
CF1	Enrolled in Head Start	81
CF2	Ever attended Head Start	164
CG12	Public or private center-based program	101
CG25	Parents contribute time at center	33
CG27	Advisory group/policy council	61
CG28	Center-based program services	34
CI1OV	Parent preferences/importance	30
CL2	Told child a story	108
CM3	Developmentally delayed	95
CM5	Disabilities	172
CM7	Services for disabilities	37
CN21O16	Mother attending school	38
Splice Interview		
PBOV3	Vocational/technical diploma	33
Household items (all interviews)		
K3_P3	Interruption of telephone service	29
K5P5	Social programs funds/services	27
K7_P7	Income	44

NOTE: Includes only those screens accessed 25 times or more.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

NHES

Lead Trainer Agenda for Experienced Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINEE MATERIALS
1	1	15 min.	Introduction	• Introductory Script • Agenda • Manuals • Seating Chart	4	• Agenda • Interviewer Manual
	2	1 hr.	Basic Screener	• Screener Script		• Terminal
	3	10 min.	Exercise on HH Enumeration	• Exercise Key		• Exercise HH Enumeration
		20 min.	*BREAK*			
	4	1 hour & 15 min.	Interactive 1: Early Childhood Program Participation (Kindergarten, Preschool)	• Interactive Script 1	3	• Terminal
	5	30 min.	Answering Respondent Questions	• Answering Respondent Questions Script		• Commonly Asked Questions
	6	30 min.	Care Arrangement Exercise	• Exercise Script • Exercise Key	1	• Exercise on Care Arrangement

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NHES

Lead Trainer Agenda for Experienced Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINEE MATERIALS
2	7	1 hr. & 10 min.	Interactive 2: Early Childhood Program Participation (Primary)	• Interactive Script 2 • Interactive Script 2A		• Terminal • Definitions of Disabilities
	8	1 hr.	Contact Procedures	• Contact Procedures Script	1	• Terminal • Mailing Request Form
		20 min.	*BREAK*			
	9	30 min.	Contact Role Plays	• Role Play Explanation		• Role Play Scripts (2 sets of 6)
	11	1 hr.	Interactive 4: Adult Education	• Interactive Script 4	2	• Terminal

NHES

Lead Trainer Agenda for Experienced Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINER MATERIALS
3	10	15 min.	Interactive 3: AE Splice Questionnaire	• Interactive Script 3		• Terminal
	12	20 min.	Refusal Avoidance	• Refusal Avoidance Script	3	
	13	40 min.	Interactive 5: Adult Education (Restart)	• Interactive Script 5		• Terminal
	14	40 min.	Exercise on Recording Course Names & Subjects	• Exercise Script • Exercise Key	1	• Exercise on Recording Course Names & Subjects • Course Coding
		20 min.	*BREAK*			
	15	45 min.	Interactive 6: Multiple Interview Household	• Interactive Script 6		• Terminal
	16	1 hr.	Role Plays 1 & 2	• Problem Sheet Script • Role Play Explanation	1	• Problem Sheet • Role Plays 1 & 2 • Terminal

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NHES

Lead Trainer Agenda for Experienced Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINER MATERIALS
4	17	15 min.	Potential Respondent Questions	• Review Script		
	18	15 min.	Recording Course Names & Subjects	• Review Script		
	19	15 min.	Care Providers	• Review Script		• Exercise on Care Providers (Review)
	20	3 hrs. & 15 min.	Role Plays 3-5 (includes 20 min. break)			• Role Plays 3-5 • Terminal

NHES

Lead Trainer Agenda for New Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINEE MATERIALS
1	1	15 min.	Introduction	• Introductory Script • Agenda • Manuals • Seating Chart	4	• Agenda • Interviewer Manual
	2	1 hour & 55 min.	Basic Screener	• Screener Script		• Terminal
		20 min.	*BREAK*			
	3	15 min.	Exercise on HH Enumeration	• Exercise Key		• Exercise HH Enumeration
	4	1 hr. & 15 min.	Interactive 1: Early Childhood Program Participation (Kindergarten, Preschool)	• Interactive Script 1	3	• Terminal

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NHES

Lead Trainer Agenda for New Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPAR-ENCIES	INTERVIEWER/TRAINEE MATERIALS
2	5	15 min.	Answering Respondent Questions	• Answering Respondent Questions Script		• Commonly Asked Questions
	6	30 min.	Care Arrangement Exercise	• Exercise Script • Exercise Key	1	• Exercise on Care Arrangement
	7	1 hr. & 15 min.	Interactive 2: Early Childhood Program Participation (Primary)	• Interactive Script 2 • Interactive Script 2A		• Terminal • Definitions of Disabilities
		20 min.	*BREAK*			
	8	1 hr. & 40 min.	Contact Procedures	• Contact Procedures Script	1	• Terminal • Mailing Request Form

NHES

Lead Trainer Agenda for New Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPAR-ENCIES	INTERVIEWER/TRAINEE MATERIALS
3	9	45 min.	Contact Role Plays	• Role Play Explanation		• Role Play Scripts (2 sets of 6)
	10	20 min.	Interactive 3: AE Splice Questionnaire	• Interactive Script 3		• Terminal
	11	1hr.	Interactive 4: Adult Education	• Interactive Script 4	2	• Terminal
		20 min.	*BREAK*			
	12	30 min.	Refusal Avoidance	• Refusal Avoidance Script	3	
	13	1 hr. & 5 min.	Interactive 5: Adult Education (Restart)	• Interactive Script 5		• Terminal

NHES

Lead Trainer Agenda for New Interviewers

DAY	SESSION	LENGTH	TOPIC	LEAD TRAINER MATERIALS	TRANSPARENCIES	INTERVIEWER/TRAINEE MATERIALS
4	14	40 min.	Exercise on Recording Course Names & Subjects	• Exercise Script • Exercise Key	1	• Exercise on Recording Course Names & Subjects • Course Coding
	15	1 hr.	Interactive 6: Multiple Interview Household	• Interactive Script 6		• Terminal
		20 min.	*BREAK*			
	16	2 hrs.	Role Plays 1 & 2	• Problem Sheet Script • Role Play Explanation	1	• Problem Sheet

NHES

Lead Trainer Agenda for New Interviewers

DAY	SESSION	LENGTH	TOPIC		TRANSPARENCIES	INTERVIEWER/TRAINEE MATERIALS
5	17	15 min.	Potential Respondent Questions	• Review Script		
	18	15 min.	Recording Course Names & Subjects	• Review Script		
	19	15 min.	Care Providers	• Review Script		• Exercise on Care Providers (Review)
	20	3 hrs. & 15 min.	Role Plays 3-5 (includes 20 min. break)			• Role Plays 3-5 • Terminal

Attachment 2: Monitoring Form

Interviewer ______________________ NAME |__|__|__|__| INITIALS |__|__| MO |__|__| DA |__|__| YR

Monitor ______________________ NAME |__|__|__|__| INITIALS

Project ______________________ NAME |__|__|__|__|__|__|__| NUMBER

TIME
BEGIN |__|__| HR |__|__| MIN AM PM
END |__|__| HR |__|__| MIN AM PM

MONITORED IN THIS SESSION

Sample Characteristics:

	YES	NO
RDD	1	2
List HH	1	2
Business	1	2
CATI	1	2
Pretest	1	2
Other	1	2

(Specify) ______________________

Interview Type:

	YES	NO
Screener	1	2
Questionnaire	1	2
Data Retrieval	1	2
Refusal Conversion	1	2
Validation	1	2
Tracing	1	2
Prompt	1	2
Language	1	2
Other	1	2

(Specify) ______________________

Estimated Number of: Contacts |__|__| Questions Asked |__|__|__|

	N/A	NO PROB-LEM	NEEDS ATTENTION		COMMENTS	DISCUSSED
			Minor Difficulty	Major Difficulty	(IF DIFFICULTY NOTED, PROVIDE Q# AND COMMENT)	1=YES 2=NO
1. READING & GENERAL SKILLS						
a. Identifies self and reads intro clearly and without pausing.		1	2	3		1 2
b. Reads all appropriate phrases and answer categories		1	2	3		1 2
c. Follows skip and box instructions		1	2	3		1 2
d. Reads questions clearly with appropriate volume		1	2	3		1 2
e. Verifies spelling, address, phone numbers, and other data as needed		1	2	3		1 2
f. Adjusts pace of interview to accommodate respondent		1	2	3		1 2

____
INTERVIEWER SIGNATURE

	N/A	NO PROB-LEM	NEEDS ATTENTION Minor Difficulty	 Major Difficulty	COMMENTS (IF DIFFICULTY NOTED, PROVIDE Q# AND COMMENT)	DISCUSSED 1=YES 2=NO
2. LISTENING SKILLS AND PROBING						
a. Listens to entire answer		1	2	3		1 2
b. Listens for what may not be said and probes		1	2	3		1 2
c. Probes unclear responses		1	2	3		1 2
d. Remains neutral when probing		1	2	3		1 2
3. RECORDING						
a. Records information accurately		1	2	3		1 2
b. Uses comments appropriately		1	2	3		1 2
c. Corrects coding errors		1	2	3		1 2
d. Uses control keys properly		1	2	3		1 2
e. Records result codes correctly		1	2	3		1 2
f. Moved through matrix and selection screens properly		1	2	3		1 2
g. Uses HH select screens properly and smoothly		1	2	3		1 2
4. HANDLING REFUSALS AND QUESTIONS						
a. Answers respondent questions and objections clearly, confidently, and briefly without hesitation		1	2	3		1 2
b. Offers verification number		1	2	3		1 2
5. TELEPHONE MANNER AND RELATIONSHIP WITH RESPONDENT						
a. Is pleasant, confident, and professional		1	2	3		1 2
b. Refrains from giving personal remarks or opinions		1	2	3		1 2
c. Accepts emotions and sentiments without becoming personally involved		1	2	3		1 2

COMMENTS: ______________________________

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Attachment 3: Screener Nonresponse Letter

U. S. DEPARTMENT OF EDUCATION
OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

NATIONAL CENTER FOR EDUCATION STATISTICS

February 24, 1995

Dear Potential Respondent,

We need your help with an important research study. Your phone number was randomly selected for the National Household Education Survey (NHES), sponsored by the National Center for Education Statistics of the United States Department of Education. Westat, Inc., the research firm conducting the study, has been telephoning households since January 3, 1995. As of the date of this letter, we have not completed an interview with your household.

Since your telephone number was scientifically selected, your household represents thousands of households in the United States. Another phone number cannot be substituted for yours. It is very important that you take part so that our survey results will accurately represent the current state of education.

For this survey, we are interested in talking with adults who have recently taken classes or courses of any kind, as well as with adults who have not. We are also interested in children's experiences in school and in early childhood programs. Your household may be selected to be interviewed about one or both of these topics. Even if you think these topics are not relevant for your household, it is important that we speak with you. The educational experiences of people in your household are a part of the wide range of adults' and children's experiences in the nation.

In the next few days, a Westat interviewer will once again dial your phone number. Please participate. If we happen to call at an inconvenient time, simply request an appointment for a time that is better for you. If you would like to set an appointment in advance of our call, simply contact Westat at their toll-free number (1-800-607-2833). The operator at that number will need your phone number, the name of the study (NHES), and your preferred appointment time.

Some frequently asked questions about the NHES are also printed on the back of this letter. I hope you will participate in this very important study.

Sincerely,

Kathryn Chandler
Project Director
National Household Education Survey

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WASHINGTON, D.C. 20208-5652

Some Frequently Asked Questions about the National Household Education Survey (NHES)

Q. *How did you get my (unlisted) phone number?*

A. Your number was randomly selected from among all of the possible telephone numbers in the nation. We do not use telephone directories to select telephone numbers. If your number was unlisted, it still is.

Q. *Do I have to give the names of people in my household?*

A. The interviewer will ask for first names only because this makes it easier to ask questions about the people in your household. If you prefer, you may give initials instead of names.

Q. *Will you keep my information confidential?*

A. All information you give to the interviewer will be kept completely confidential. All employees of the U.S. Department of Education and Westat who are working on this study are required by law to protect the confidentiality of respondents. Also, individual responses are never published in reports; they are combined with the responses of others and are published as grouped data only.

Q. *How long will the survey take?*

A. First, there are a few short questions about the members of your household that usually take 5 minutes or less. These questions determine if anyone from your household is selected to participate further in the study. If no one is selected, your participation is complete. In about half of all households, *no one* is selected for an additional interview.

If you are chosen for an interview, it will take about 10 to 20 minutes on the average. An interview can take a few minutes more or less depending on your answers.

Q. *How will the study results be used? What will you do with this information?*

A. Some information from the study will be published in the annual report for the National Education Goals Panel. This study will also result in a series of reports on special topics related to education for adults and children. Those reports will be widely distributed to educators, researchers, news organizations, and the general public. The information we collect will also be used to better understand educational experiences and needs. Note that the results are published as summary tables only, and do not reveal individual answers.

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Attachment 4: Extended Interview Nonresponse Letter

U. S. DEPARTMENT OF EDUCATION
OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT

NATIONAL CENTER FOR EDUCATION STATISTICS

March 13, 1995

Dear Potential Respondent,

We need your help with an important research study. Your phone number was randomly selected for the National Household Education Survey (NHES), sponsored by the National Center for Educational Statistics of the United States Department of Education. Westat, Inc., the research firm conducting the study, has been telephoning households since January 3, 1995. We have spoken with a member of your household, and someone was selected to participate in the NHES study. However, as of the date of this letter, we have not completed all interviews with your household.

Since your telephone number was scientifically selected, your household represents thousands of households in the United States. Another phone number cannot be substituted for yours. It is very important that you take part so that our survey results will accurately represent the current state of education.

For this survey, we are interested in talking with adults who have recently taken classes or courses of any kind, as well as with adults who have not. We are also interested in children's experiences in school and in early childhood programs. Your household has been selected to be interviewed about one or both of these topics. Even if you think these topics are not relevant for your household, it is important that we speak with you. The educational experiences of people in your household are a part of the wide range of adults' and children's experiences in the nation.

In the next few days, a Westat interviewer will once again dial your phone number. Please participate. If we happen to call at an inconvenient time, simply request an appointment for a time that is better for you. If you would like to set an appointment in advance of our call, simply contact Westat at their toll-free number (1-800-607-2833). The operator at that number will need your phone number, the name of the study (NHES), and your preferred appointment time.

Some frequently asked questions about the NHES are also printed on the back of this letter. I hope you will participate in this very important study.

Sincerely,

Kathryn Chandler
Project Director
National Household Education Survey

WASHINGTON, D.C. 20208-5652

Some Frequently Asked Questions about the National Household Education Survey (NHES)

Q. ***How did you get my (unlisted) phone number?***

A. Your number was randomly selected from among all of the possible telephone numbers in the nation. We do not use telephone directories to select telephone numbers. If your number was unlisted, it still is.

Q. ***Why do you need to know about me or my child?***

A. It is important for the U.S. Department of Education to understand the educational needs and experiences of Americans of many different age groups. The President and Governors have established several education goals to be achieved by the year 2000. One of the education goals for the nation has to do with children's opportunities for preschool learning. Another goal concerns opportunities that adults have for learning in school, at work, or even for personal interest. To monitor progress towards these goals, we need to talk with you about the educational experiences in your household.

Q. ***Will you keep my information confidential?***

A. All information you give to the interviewer will be kept completely confidential. All employees of the U.S. Department of Education and Westat who are working on this study are required by law to protect the confidentiality of respondents. Also, individual responses are never published in reports; they are combined with the responses of others and are published as grouped data only.

Q. ***How long will the survey take?***

A. An interview takes about 10 to 20 minutes on the average. An interview can take a few minutes more or less depending on your answers.

Q. ***How will the study results be used? What will you do with this information?***

A. Some information from the study will be published in the annual report for the National Education Goals Panel. This study will also result in a series of reports on special topics related to education for adults and children. Those reports will be widely distributed to educators, researchers, news organizations, and the general public. The information we collect will also be used to better understand educational experiences and needs. Note that the results are published as summary tables only, and do not reveal individual answers.

1995 National Household Education Survey
Survey Administration Time

Introduction

This section reports the interview administration times for the various components of the 1995 National Household Education Survey (NHES:95). The time it takes respondents to complete survey interviews is an important factor in both the response rate and response quality. While surveys need to include all of the important analytic variables, they should also strive to be as brief as possible to reduce the burden on the public and to encourage complete and reliable responses. In addition to using interview administration timings to measure response burden, timings can also be used to measure the productivity of interviewers and to plan for future studies using similar questionnaire items.

The NHES:95 had several instruments for which administration times were recorded: the Basic and Expanded Screeners, the Early Childhood Program Participation (ECPP) interview, the Adult Education (AE) interview, and the AE Splice interview. The amount of time it took to administer the Screeners and the various survey components of the study was automatically recorded on the CATI database. The timings recorded include overall timings for each completed instrument as well as timings for several subcomponents of the interviews. Thus, the relative burden of specific sections of each interview can be assessed in addition to the time to complete entire interviews.

The following text describes the procedures used to edit the recorded interview timings before they were used in analyses. As explained below, the editing procedures involved assigning mean timings to any extreme outliers so that they did not have an undue influence on the timing analyses. The edited timing data were used in the analyses presented in this report. The remaining portions of this section discuss the results of the timing analyses that assessed the time to complete entire interviews as well as the administration times for specific interview paths and interview sections. Also discussed briefly are how the average timings and interview burden hours compare to those estimated prior to NHES:95 data collection, and some implications of the results of the timing analyses for future data collections.

Editing the Administration Time and Other Data Considerations

The time required to complete each segment of each interview was recorded automatically by the NHES:95 CATI system. However, this recorded time does not always reflect the true administration time. For example, if the interviewer waited on the telephone while the respondent took care of other business, such as answering the door or tending to a child, the length of time recorded would be artificially inflated. In these instances, the interviewer had no formal way to record why the interview was taking longer than normal. Monitoring of interviews has indicated that such delays in interviews do occur and that provisions need to be made to give an accurate representation of the administration length.

Because the purpose of this analysis is to estimate respondent burden for the NHES:95 interviews, recorded times that were extreme outliers were edited. The process of editing the outliers involved analyzing the distribution of administration times for the Basic and Expanded Screeners and for each of the 37 timing segments making up the three extended interviews (19 ECPP segments, 15 AE segments, and 3 AE Splice segments). The mean time was assigned to the top and bottom 1 percent of outlying scores. Where appropriate, outliers for extended interview segments were edited separately according to participation status. For example, timings recorded for repeating interview segments were analyzed separately for respondents with one course or one arrangement in the segment versus those with more than one course or arrangement, so that relatively high timings reflecting multiple loops through an interview segment were not erroneously considered outliers. Participant status was also taken into consideration for editing timings of some non-repeating interview segments such as the ESL section in the AE interview and the Self Care section in the ECPP interview.

One other situation required special treatment. Specifically, timing data for the last 10 questions in the Head Start section were incomplete for some cases due to a programming problem with the timing variable. The problem was detected and fixed during data collection, but resulted in unrecorded timings for approximately one-third of Head Start participants. Because of the relatively large number of cases affected by this problem, the timings for the affected cases were not imputed, but were instead excluded from the analyses.

It should also be noted that when more than one child or adult was sampled from the household, some data items were collected only once per household or once per respondent. This affected the administration time recorded for the parent information and household characteristics segments of the ECPP, AE, and AE Splice interviews. For example, household characteristics such as income and ZIP code were asked only in the first extended interview conducted in the household. Other items, such as mother's education, were asked only one time if the same person was the mother of more than one sampled child in the household. The rationale for collecting the information one time for all sampled members is obvious. However, this timesaving device does complicate the analysis of the timing data, since the time is recorded only for the first extended interview in the household.

The impact of this method of collecting the data is that the first extended interview in each household is longer than subsequent interviews. The overall mean time for each type of interview includes both first interviews and subsequent interviews in households with more than one sampled member. When the mean time to complete a particular extended interview is discussed, this factor should be kept in mind.

A final note about the timing data is that the number of cases with recorded timings at each interview segment does not always match the number of cases in the segment in the AE or ECPP database. This is because of data updates that involved moving entire interview segments, creating new interview segments, or deleting segments.

Results of Interview Timing Analyses

Tables 1, 2, 3, and 4 at the end of this section present the administration times in minutes for the Basic and Expanded Screeners, the ECPP interview, the AE interview, and the AE Splice interview. The timings presented are for interviews that are considered complete; that is, the respondent provided answers to all items considered critical to fulfilling the purpose of the survey. The total interview times, in addition to the high item-response rates obtained, indicate that the NHES:95 was relatively successful in obtaining the required data without overburdening the respondents. These overall timings, however, are less informative than more detailed timings also presented in the tables. Because of the extensive skip patterns within each interview component, it is also important to examine interview timings by interview path, by participation status, and by interview segment. These are all discussed in the sections that follow.

Screener Administration Time

As shown in table 1, the Basic Screener took 3.2 minutes to complete and the Expanded Screener took 7.2 minutes to complete, on average. However, the time required to administer the Basic or Expanded Screeners varied according to whether household members were sampled for any extended interviews, and whether they were eligible for only the AE interview, only the ECPP interview, or both interviews. For the Basic Screener, the average administration time was lowest among households in which no members were sampled for extended interviews (about 30 percent of all Basic Screeners), and in households in which members were sampled for only the AE interview (about 46 percent of all Basic Screeners). In these circumstances, it took an average of 3 minutes to complete Basic Screeners. It took about one minute longer to administer Basic Screeners in households with children eligible as subjects for ECPP interviews (3.8 to 4.1 minutes). The increase in time for these households was probably due to having more members to enumerate, as well as the additional child-related items administered to identify children's enrollment status, grade level, and the parent or guardian respondents for the extended interviews.

In contrast, the average Expanded Screener administration time was highest among households with no members sampled for extended interviews, at 8.1 minutes. This is primarily because an entire section of the Expanded Screener containing items related to household characteristics (e.g., home ownership, interruption of telephone service, receipt of public assistance, household income) was administered only among households in which no members were sampled for extended interviews. The next highest administration times were observed among households with children eligible for the ECPP interview. It took an average of approximately 7.5 minutes to complete the Expanded Screener in households with children sampled for ECPP interviews. Households with only AE interviews had the lowest average administration time, at 6.3 minutes.

Early Childhood Program Participation (ECPP) Administration Time

The mean time to administer the ECPP interview was 12.6 minutes; however, this varied quite a bit according to children's interview paths (i.e., Infant/Toddler, Preschool, Kindergarten, Primary, and Home School). Table 2 shows that the shortest interview timings were observed for the Infant/Toddler path and the Home School path, mainly because several segments of the interview were not administered for these children. Interviews for infant/toddlers and home schoolers took 9.1 to 9.5 minutes to administer on average. The next highest average administration time was for preschoolers, at approximately 13 minutes. Interviews for school-aged children took somewhat longer, as they contained the most interview segments. Interviews for kindergartners took an average of 13.5 minutes to complete; primary school interviews took an average of 15.2 minutes to complete.

Table 2 also shows the average interview completion time according to children's participation in child care arrangements or programs. Not surprisingly, the average interview administration times increase with the number of arrangements or programs reported. Interviews for children not participating in any child care arrangements or programs took 10 minutes to administer on average. This increases to an average of 14.4 minutes for children with one arrangement or program, and 17.2 minutes for children with two or more arrangements or programs.

Table 3 shows the average administration times for various segments of the ECPP interview. For example, the introduction consisted of questionnaire items A1 through A19. These items were asked in all completed interviews and had an average completion time of 1.5 minutes. Other segments were not asked for children following some of the paths. For example, the kindergarten experience items were asked only for kindergartners and primary school children who attended kindergarten.

Not surprisingly, the most time consuming segments of the ECPP interview were those collecting detailed information about care arrangements and programs. Collecting information related to Head Start and center-based programs took longer than other arrangement types, at about 5 to 6 minutes for each program. This is not unexpected since there were slightly more questions included in the segments related to center-based programs than in those related to home-based arrangements. Information on relative and nonrelative arrangements took approximately 3 minutes to collect for children with one relative or nonrelative arrangement, and 5 to 6 minutes for children with 2 or more arrangements. For children reported to have participated in previous arrangements, completion of the Program Continuity segment took an average of 2.8 minutes. Aside from these care arrangement and program segments of the interview, each other segment took under 2 minutes to complete on average, with several taking less than 1 minute.

While the segment timings in table 3 are presented only for those cases involved in the segment, it is also possible to estimate each average segment timing for the entire sample. For example, the average time to complete the nonrelative care arrangement segment once for the entire sample is approximately 0.46 minutes [(3.4*1,889)/14,064]. This equation is [(mean timing for one nonrelative arrangement*number of cases reporting one nonrelative arrangement)/(total sample size)]. The overall segment timings for just those receiving the segment can also be estimated in a similar way. For example, the approximate time to complete the relative care section, among those reporting relative arrangements, is 3.3 minutes [(3.1*2,415)+(5.3*289)/(2,415+289)]. Similar estimates may be made for the Adult Education interview which is discussed below.

Adult Education (AE) Interview and AE Splice Interview Administration Times

As shown in table 2, the average administration time across all AE interviews was approximately 14 minutes; however, this varied substantially according to the participation status of adults. Participant interviews took an average of 16.8 minutes to complete, compared to 9.5 minutes for nonparticipants. In addition, AE participant interviews in which several types of courses or programs were reported took 5 minutes longer to administer on average than those with just one type of adult education reported (20 versus 15 minutes). Among the AE Splice interviews, participant interviews also took longer to administer on average than did nonparticipant interviews. The AE Splice interview took an average of 4.5 minutes for participants and 3.8 minutes for nonparticipants.

Table 4 presents the average administration times for various segments of the AE interview. Of the various types of adult education, items related to ESL participation, ABE/GED participation, and credential-seeking took the most time to administer on average. Collecting information about ESL or ABE/GED courses took approximately 5 minutes on average, as did collecting information about each credential program. The career- or job-related activities section was relatively less time consuming; administration times for this section ranged from 2.7 minutes among those participating in only one activity to 6.0 minutes for those reporting two or more job-related activities. Slightly lower administration times were recorded for the apprenticeship and other formal structured activities sections. Participants in apprenticeship programs took an average of 2.4 minutes to complete that segment of the interview. Participants in other formal structured activities took an average of 2 minutes to complete the segment for one activity, and 4.2 minutes for two or more activities. The brief segment pertaining to computer or interactive video instruction took an average of 1.2 minutes to complete for participants in that type of activity.

When the average administration times for all items pertaining to current and past employment information are added together, it is also evident that these items were relatively time consuming, taking approximately 4 minutes to complete on average.

As for the AE Splice interview, items concerning participation in adult education took an average of 2.1 minutes to administer. The background and household information segments together took about the same time to complete, 2 minutes.

Comparison of Actual Number of Interviews and Interview Timings to OMB Burden Estimate

Table 5 presents the number of burden hours estimated at the time of OMB clearance for the NHES:95 and the estimated burden hours according to the actual number of completed interviews and mean interview timings. As the table shows, both the average amount of time to administer the interviews and the number of completed interviews is smaller than that estimated at the time of OMB clearance, resulting in a lower number of burden hours. The number of completed interviews and burden hours estimated for OMB was 100,100 interviews and 16,366 hours. In contrast, based on the observed average interview timings and a total of 82,820 completed interviews, the estimated burden is 10,342 hours.

Implications for Future Collections

The information on survey administration timings included in this report has some implications for future data collection efforts. For instance, the timings presented in this report could be used to assist in estimating the administration times of future surveys containing questions similar to those used in the ECPP, AE, and AE Splice questionnaires. In addition, there is some indication that interview timings may also be associated with response rates. As discussed in the "Unit Response Rates" section of *Unit and Item Response Rates, Weighting, and Imputation Procedures in the 1995 National Household Education Survey*[23], the completion rate for AE Splice interview (87 percent) which had a relatively short administration time was notably higher than that for the AE interview (80 percent). This suggests the importance of limiting the length of a survey as much as possible in order to minimize any negative effect that longer administration times may have on response rates.

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[23] Brick and Broene, op.cit.

Table 1.--Mean administration time (in minutes) of NHES:95 completed Screeners

Completed interviews and interview components	Interview length in minutes	
	Number	Mean
Basic Screener		
Overall	43,987	3.2
No one sampled	13,254	2.9
Only Adult Education sampled	20,057	3.0
Only Early Childhood Program Participation sampled	3,398	3.8
Both Adult Education and Early Childhood Program Participation sampled	7,278	4.1
Expanded Screener		
Overall	1,478	7.2
No one sampled	493	8.1
Only Adult Education sampled	623	6.3
Only Early Childhood Program Participation sampled	130	7.5
Both Adult Education and Early Childhood Program Participation sampled	232	7.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 2.-- Mean, median, and quartile administration time (in minutes) of NHES:95 completed extended interviews, by interview type and overall participation level

Completed interviews and interview components	Interview length in minutes					
	Number	Mean	Standard deviation	Quartiles		
				75%	Median	25%
Interview totals:						
Early Childhood Program Participation . . .	14,064	12.6	5.8	16.2	12.3	8.3
Adult Education	19,722	13.9	6.2	17.4	13.0	9.1
Adult Education--Splice	3,569	4.1	1.4	4.7	3.8	3.2
Interview type:						
Early Childhood Program Participation						
Infant/Toddler	4,135	9.1	4.9	12.4	8.3	5.2
Preschooler	3,431	12.9	5.7	16.3	12.6	8.9
Kindergartner	1,680	13.5	5.4	17.0	12.8	9.6
Primary Schooler	4,717	15.2	5.3	18.5	14.5	11.6
Home Schooler	101	9.5	4.9	11.2	8.3	6.5
Adult Education						
Participant	11,713	16.8	5.8	20.1	16.0	12.8
Nonparticipant	8,009	9.5	3.8	11.2	8.8	7.0
Adult Education--Splice						
Participant	1,600	4.5	1.5	5.3	4.2	3.5
Nonparticipant	1,969	3.8	1.2	4.2	3.6	3.1
Overall Participation Level:						
Early Childhood Program Participation						
No arrangements	6,751	10.2	5.1	13.2	9.9	6.2
One arrangement	5,999	14.4	5.4	17.8	13.8	10.5
Two or more arrangements	1,314	17.2	5.7	20.8	16.9	12.8
Adult Education Participants						
One type of adult education	8,351	15.4	5.1	18.2	14.6	12.0
Two or more types of adult education . . .	3,362	20.2	6.0	24.1	19.7	15.9

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 3.-- Mean, median, and quartile administration time (in minutes) of NHES:95 ECPP completed interviews, by interview segment

Completed interviews and interview components	Interview length in minutes					
	Number	Mean	Standard deviation	Quartiles 75%	Median	25%
Interview segments:						
Early Childhood Program Participation						
Introduction (A1-A19)	14,064	1.5	0.7	1.8	1.4	1.0
Kindergarten History and Experience (B1-B14)	6,388	1.6	0.6	1.8	1.5	1.2
Primary School History and Experience (C1-C12)	4,706	1.6	0.6	1.8	1.5	1.2
Relative Care Intro (D1-D4OV)	14,064	0.8	0.4	0.9	0.7	0.6
Relative Care Arrangements (D5-D29)						
One arrangement	2,415	3.1	1.3	3.6	2.8	2.2
Two or more arrangements	289	5.3	2.1	6.2	5.0	3.9
Nonrelative Care Introduction (E1-E4OV) .	14,064	0.6	0.3	0.7	0.5	0.4
Nonrelative Care Arrangements (E5-E29)						
One arrangement	1,889	3.4	1.1	3.9	3.2	2.6
Two or more arrangements	112	6.3	2.6	7.2	6.0	4.7
Head Start Programs (F1-F33OV)						
Head Start participants*	217	5.7	2.2	6.4	5.3	4.3
Center-based Programs Introduction (G1-G9)	14,064	0.5	0.3	0.7	0.4	0.2
Center-based arrangements (G10-G41)						
One arrangement	2,953	4.9	1.4	5.6	4.7	4.0
Two or more arrangements	81	9.4	2.3	10.7	9.1	7.8
Program Confirmation (H1)	7,314	0.3	0.2	0.3	0.3	0.2
Parent Preferences (I1)	6,433	1.0	0.4	1.2	1.0	0.8
Self Care (J1-J8)						
Self Care participants	107	0.9	0.4	1.0	0.8	0.6
Program Continuity (K1-K9)						
Previous arrangement participants .	331	2.8	1.3	3.3	2.4	1.9
Home Activities (L1-L5)	14,064	0.6	0.3	0.8	0.6	0.4
Health and Disability (M1-M13)	14,064	1.1	0.6	1.2	0.9	0.8
Mother Items (N1-N22)	13,762	1.5	1.2	2.3	1.5	0.4
Father Items (O1-O15)	10,803	0.7	0.6	1.0	0.7	0.0
Household Characteristics (P1-P8OV) . . .	6,212	1.6	0.4	1.8	1.5	1.3

* Because of a programming problem, the complete timing for the Head Start segment was not recorded for one-third of Head Start participants. These cases are excluded from the analysis.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 4.-- Mean, median, and quartile administration time (in minutes) of NHES:95 AE and AE Splice completed interviews, by interview segment

Completed interviews and interview components	Interview length in minutes					
	Number	Mean	Standard deviation	Quartiles		
				75%	Median	25%
Interview segments:						
Adult Education						
Initial Background (A1-A11)	19,722	1.4	0.6	1.7	1.3	1.0
English as a Second Language (B1-B25)						
ESL participants	229	4.5	3.0	6.3	4.4	1.8
ESL nonparticipants	1,198	1.2	1.3	1.2	0.7	0.5
Adult Basic Skills and GED Prep (C1-C24)						
ABE/GED participants	456	5.2	1.8	6.1	5.0	4.0
ABE/GED nonparticipants	3,174	1.0	0.8	1.1	0.8	0.6
Credential Introduction (D1-D4)	19,722	0.8	0.5	0.9	0.6	0.5
Credential Programs (D5-D21)						
One program	3,416	4.7	1.9	5.6	4.3	3.3
Two or more programs	361	9.1	3.6	10.8	8.3	6.7
Apprenticeship (E1-E7)						
Apprenticeship participants	284	2.4	1.3	2.8	2.0	1.6
Career or Job Related Introduction (F1-F3)	19,722	1.6	1.3	2.2	1.0	0.6
Career or Job Related Activities (F4-F26)						
One activity	1,947	2.7	0.9	3.1	2.5	2.1
Two or more activities	3,813	6.0	2.6	7.3	5.5	4.2
Other Formal Structured Introduction (G1-G3)	19,722	0.7	0.7	0.7	0.4	0.3
Other Formal Structured Activities (G4-G14)						
One activity	2,715	2.0	0.7	2.3	1.8	1.5
Two or more activities	2,083	4.2	1.7	5.0	3.9	3.0
Computer/Interactive Video Only (H1-H3)						
Computer/Interactive participants	3,009	1.2	0.6	1.4	1.0	0.8
Remaining Background-Introduction (I1-I14)	19,722	1.4	0.5	1.6	1.2	1.0
Remaining Background-Current and Past Labor Force Status (I15-I25)	19,722	0.7	0.5	0.9	0.6	0.4
Remaining Background-Current Job Characteristics (I26-I37)	19,722	1.9	1.3	2.7	2.0	1.1
Household Characteristics (J1-J8OV)	17,485	1.5	0.5	1.6	1.4	1.2
Adult Education--Splice						
Participation (A1-A9)	3,569	2.1	0.9	2.5	1.9	1.5
Background Information (B1-B4)	3,569	0.6	0.3	0.7	0.5	0.4
Household Characteristics (C1-C8)	3,301	1.4	0.4	1.6	1.3	1.1

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 5.-- Comparison of OMB burden estimate to actual interview timings and number of interviews completed

Completed interviews	OMB Burden Estimate			Actual		
	Administration Time (minutes)	Number of Completed Interviews	Total Time (hours)	Mean Administration Time (minutes)	Number of Completed Interviews	Total Time (hours)
Screener	4	60,000	4,000	3.4	45,465	2,576
Early Childhood Program Participation	20	18,000	6,000	12.6	14,064	2,953
Adult Education	20	18,100	6,033	13.9	19,722	4,569
Adult Education, Splice	5	4,000	333	4.1	3,569	244
Total		100,100	16,366		82,820	10,342

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

1995 National Household Education Survey
Data Editing

Introduction

The final product of the NHES:95 data collection process is the delivery of edited data files and associated documentation. In order to ensure that the data are complete and of high quality, a series of data editing procedures were conducted. Data editing (correcting interviewer, respondent, and program errors) was performed throughout the NHES:95 data collection and potentially introduced other errors in data items that had previously been edited during the administration. Therefore, extensive *post* data collection data editing procedures were instituted to achieve quality data. These procedures included checking data alignment, confirming that data were within the defined range of values for each item, performing logic and structural edits, reviewing cross tabulations between data items, and reviewing frequency distributions for individual data items to ensure skip patterns were followed appropriately. After imputation of missing values was completed, these procedures were repeated to ensure that no errors were introduced during imputation. Each of these procedures are described below.

Also discussed below are some problems that were encountered during data collection and some corresponding suggestions for questionnaire improvements are made. Attachments to this section detail the specific range, logic, structural edits, and data base structure that were in place for the NHES:95.

Data Alignment

At the conclusion of data collection, alignment edits were run against the entire database to ensure appropriate alignment of data. These edits verified that character data were left justified ("John ") and numeric data were right justified (" 200.5"). This provided for clean frequency review by representing all identical values together. For example, " 1" and "1 " were represented in the database as " 1".

Range Edits

The ranges of responses for closed-ended items in the NHES CATI survey were determined by the permissible response codes. For open-ended items that required an entry by the interviewer (such as ages, dates, amounts paid for tuition and expenses, etc.), there was not a specific set of responses. Therefore, reasonable ranges were defined and applied to these items.

Range edits included both "hard" and "soft" ranges. A **soft range** was one that represented the reasonable expected range of values, but did not include all possible values. Responses outside the soft range triggered a message during data collection that the response was *unlikely*. The interviewer confirmed the response with the respondent and reentered it. For example, the number of hours each week a child attended primary school had a soft range of 25 to 35. A value outside this range may have been entered and confirmed as correct by the interviewer as long as it was within the hard range of values (6 to 45). A **hard range** represented the finite set of parameters for the values that could be entered into the CATI system. Responses outside the hard range triggered a message to the interviewer that the response was *unacceptable*. Hard ranges could not be exceeded by the interviewer, even with confirmation. For example, the range of possible values for the total hours worked for pay or income per week was 1 to 99. It is extremely rare that a respondent would have worked more than 99 hours per week. If this were in fact, true, the interviewer would have recorded this in comments or on a problem sheet. All comments and problem sheets were reviewed by data preparation staff who had the ability to override hard ranges to input the value. Definitions of hard and soft ranges were reviewed after each of the field tests and adjusted as necessary. Soft and hard ranges were reviewed again against responses obtained during the first few weeks of data collection and were not found to be too restrictive. They were not changed during the main study.

After the post data collection updating process was completed, range edits were re-run for all completed interviews (BASM.MAINRSLT = CI, CN, CK, CS, CH, CU, CP, CX, CY, CL, CV) to ensure that no outliers (other than those expected) were inadvertently introduced during updating.

Logic Edits

Logic edits involved the comparison of two or more items. They were used to examine the relationships between responses to be sure that they did not conflict with one another, and that the response to one item did not make the response to another item unlikely. If a discrepancy among responses was encountered during administration of the interview, an error message was displayed and the interviewer attempted to reconcile the difference while on the telephone with the respondent. Logic edits were implemented in the CATI using "confirmation screens" and "until statements." **Confirmation screens** displayed the discrepant items again and prompted the interviewer to reconfirm the responses. New values may have been entered or the old responses retained by pressing "enter" at each entry field. An example of a confirmation screen is the age/grade edit check. If a child was attending a grade that was outside the normal range of grades for his age, the interviewer was prompted to read the child's age and grade again and correct any errors (if they existed). **Until statements** are somewhat stricter than confirmation screens. With until statements, the interviewer was unable to leave the screen until he/she entered a response that met the consistency edit criteria. Questions in which a number and a unit were collected (i.e. "How long does the apprenticeship program last?") were programmed using until statements since they could not be checked with a simple range edit. These until statement logic edits reconciled two items to each other, the number and the unit of time, and required an entry within the hard range for each unit before the screen could be exited. Responses that legitimately violated the edit were entered into comments for further review.

After data collection and editing by data preparation staff, the logic edits were re-run for all completed cases to ensure data integrity. The attached logic edit specifications (attachment 1) include the definition of the logic edits that were performed during CATI data collection and as a post data collection editing effort.

Structural Edits

The relationships of database records were often dependent on values of variables contained in other database records. Structural edits ensured the structural integrity of the database (i.e. all database records which should exist did exist, and those which should not exist did not exist) by checking these variable values and the existence/non-existence of other records. The structural edits were run against completed interviews only. They were grouped into four logical categories: edits that verified interview completeness, edits that confirmed the presence of appropriate person records, edits that verified parent relationships in the household, and edits that verified consistency of common items. The specifications for the structural edits are included in attachment 2. Some of these structural edits were run against field test data to verify that the CATI instrument was functioning as expected. Attachment 3 is the NHES:95

Database Design diagram that displays the database hierarchy graphically. It may be helpful to refer to the diagram when reviewing the structural edits.

Frequency and Cross Tabulation Review

The frequencies of responses to all data items (both individually and in conjunction with related data items) were reviewed to ensure that appropriate skip patterns were followed. Members of the data preparation team checked each item to make sure the correct number of responses was represented. If a discrepancy was discovered, the problem cases were identified and reviewed. If data were incorrectly stored in the database, the audit trail for the interview (which provided a keystroke-by-keystroke record of all responses entered), was retrieved to determine the appropriate response. If the audit trail revealed no additional information, item clarification callbacks (i.e., attempts to recontact the respondent and administer the missing items) may have been made or the items coded as "not ascertained." It was rarely necessary to retrieve audit trails during the NHES:95 Data Collection period.

Frequency Review of Text Items

The "Other, Specify" variables containing open-ended text responses (these variables are identified by variable names that end in "OS") were reviewed to determine if they should have been coded into one of the existing code categories. If so, the recoding was completed. If there was a response that occurred a substantial number of times for a particular text item, a new code was created and the responses were recoded. Please refer to the AE and ECPP Data File User's Manuals for documentation of new categories that were added after data collection. In the questionnaires included in these manuals, new categories appear in italics.

An unusually large number of "other, specify" responses was observed for the barriers items in the work-related section (n = 491). Proportionally large "other, specify" responses were also observed for the same items in the ABE/GED and ESL sections, although the numbers were very small. After considering the content of these specified responses and the impact of their incorporation into the barriers sections in terms of backcoding, recoding, and imputation, we recommended an alternative to backcoding to NCES. For each barriers section, a new variable was constructed and open-ended coding of the "other, specify" responses was done for these variables. The same set of categories was used in each section to permit data users to combine information across barriers sections in their analysis. These categories are described below:

(1) Personal/family obligation or problem, including caring for an elderly or sick relation, wanting to spend time with children, and so on;

(2) Health problem, that is, the respondent him/herself had a health problem or disability that prevented his/her participation;

(3) Distance/location of the classes;

(4) Age, usually given in reference to the respondent being elderly;

(5) Motivation, including responses such as lack of motivation, lack of energy, and so on;

(6) Availability of courses, including responses such as "course cancelled" or "course full";

(7) Qualifications/requirements, for example, needing a diploma or GED to participate, needing to pass a test, or needing to be a citizen;

(8) Work-related reasons; and

(9) Other, including a wide range of miscellaneous answers.

Problem Areas and Suggestions for Improvements in Future Surveys

1. Inaccuracies in the enumeration of household members in the Screener (S6) occasionally caused problems in the administration of the ECPP interview, especially in the Relative Care items. These inaccuracies included omission of household members (especially grandparents of sampled children), inclusion of nonhousehold members, and erroneous information about the household members listed. Whenever household member omissions were recognized (through the review of problem sheets or interviewer comments), recontact efforts were made on these households. Because the known instances of these situations were rare (less that 100 occurrences across all households in the NHES:95), we do not recommend a change in the enumeration process.

2. Early in the data collection process, there was concern that Screener respondents were reporting household members who served in the Reserves or National Guard as serving on active duty in the U.S. Armed Forces. This resulted in a larger number of ineligible AE interviews than expected. All of those coded as ineligible for this reason were called back to confirm their military status (see the section titled Item Clarification Callbacks, Item 2, in the "Data Collection" portion of this report for recontact results). The question stem was modified so that "NOT counting the Reserves or National Guard" was always read aloud. We recommend including this phrase in future administrations that use this question.

3. The inclusion of the questions regarding children's primary and secondary arrangements while their mothers are at work or school (i.e., "What is (CHILD) usually doing or how is (HE) usually cared for during most of the hours that (you) (are) at (work) (or) (school or training)?") in the ECPP interview (CATI screens N23 and N25) necessitated extensive data cleaning. In over 450 interviews (about 3% of the total 14,064 completed ECPP interviews), something other than a previously described arrangement, school, parental care, or self care was recorded in these questions. These responses were reviewed to determine if they could be coded into a precoded response category (e.g., school, other parent), were duplicates of previously reported arrangements, backup arrangements, or regular arrangements that were not previously mentioned. Two hundred sixty-four responses fell into the latter category, and 191 relative care arrangements, 65 nonrelative care arrangements, and 8 center-based care arrangements were added to the data base. These questionnaire items were asked after the Program Confirmation screen (Section H--the facility built into the CATI for arrangement additions/deletions/modifications) had been passed. To avoid similar problems in future surveys, we recommend not including questionnaire items late in the survey that could contradict information collected earlier, unless the means to correct any conflicting information is available.

4. Respondents in the AE component whose single job in the past 12 months was an assistantship, fellowship, or work-study program (as determined by responses at the number of employers question (A8) and the assistantship question in the Credential section (D16OV2) were not considered to be active in the labor force. However, question A8 did not specify whether assistantships/fellowships/work-study should be included or excluded in the count of employers.

There was no way to tell if the respondent included an assistantship as employment or purposely omitted it and mentioned a single different employer at this question. Modifying the question stem to include "Counting any self-employment and any assistantships, fellowships, or work-study programs you may have had..." would clarify this issue.

5. Many "other obstacles" were mentioned in the three Barriers to Adult Education sections (questions B21, C21 and F27 in the AE interview). In some cases, this occurred because respondents and interviewers had trouble classifying the obstacle(s) in the categories provided. In other cases, respondents may not have shared the instrument's definitions concerning the classification of various types of barriers. One example is caring for a sick or disabled family member. This was included as a category (family responsibilities) under the general barrier of "time." It appears that some respondents did not think of their situation as a time problem. We recommend that the barriers items be revisited when the AE component is repeated, in order to make the items more compatible with the respondents' conceptions. Possible strategies for improving these items include a review of the "Other, specify" responses to these items, AE expert review and recommendations, and a focus group specifically addressing the subject of barriers to participation.

6. There was some confusion about the difference between courses taken for a credential and the other types of courses collected in the AE interview. Based on the main reason for participation given by the respondent, 119 credential courses were recoded as work-related courses or other structured activity courses, 6 were recoded as basic skills/GED preparation courses, and one was recoded as an apprenticeship program. This required the moving of CATI segments. However, not all items were the same across segments, and some items in the new segments had to be coded as "not ascertained." In the future, emphasizing the differences during training and stressing that credentials do NOT include certificates of completion for short courses may mitigate this problem. In addition, we recommend that the idea of moving segments be revisited in the next administration of the AE component. This was a very labor intensive effort for relatively few cases. Alternative measures, such as adding a flag variable to the data file alerting data users of potential data anomalies may be more desirable.

7. The assumption that companies that provided support for courses (variables ESPROVEM, BSPROVEM, CR1PREMP-CR3PREMP, and WR1PREMP-WR6PREMP in the AE data file) were also employers of the respondent made review and cleaning of EMPL (employer) segments necessary. When asked, 'What was the name of the company that provided the support (,including the instruction)?' respondents often mentioned non-employers, such as the school they attended or the name of the training organization that conducted the class. Because it was assumed that companies named at this item were employers (and sponsors of the training), EMPL segments were automatically created in the CATI, and CATI screens J29 - J31 were displayed as if these supporters were previous or current employers. When this was not the case, the interviewers resorted to recording "NOT MY EMPLOYER" or "NEVER WORKED FOR (COMPANY)" to get through these items. These incorrect EMPL segments were deleted during the data cleaning process, and any dependent data updated. This included correcting variables ESPROVEM, BSPROVEM, CR1PREMP-CR3PREMP, and WR1PREMP-WR6PREMP. In future administrations, changing the question stem ("What was the name of the employer that provided the support...") or not creating EMPL segments for companies named at this item might resolve this problem.

Attachment 1
Range and Logic Edit Specifications

The range and logic edits are defined below for each component. Edits noted with an asterisk (*) were added or modified based on data collection experience after the Data Editing Plan was delivered. The item numbering of the edit specifications reflects the numbering of the CATI screens. A renumbered questionnaire was produced after the instruments were finalized, and some new numbers will not match these specifications.

Basic Screener

S9. *Grade or year person is attending*

If age = 3 - 4, then grade = -1, N, T, K, P, U, S
If age = 5, then grade = -1, N, T, K, P, 1, U, S
If age = 6, then grade = -1, N, T, K, P, 1, 2, U, S
If age = 7, then grade = -1, T, K, P, 1, 2, 3, U, S
If age = 8, then grade = -1, 1, 2, 3, 4, U, S
If age = 9, then grade = -1, 2, 3, 4, 5, U, S
If age = 10, then grade = -1, 3, 4, 5, 6, U, S
If age = 16, then grade = -1, 9, 10, 11, 12, U, S
If age = 17, then grade = -1, 10, 11, 12, U, S, 15, 16, 17
If age >= 18, then grade = -1, 11, 12, U, S, 15, 16, 17

S10. *Grade equivalent*

If age = 3 - 4, then grade equivalent = -1, N, T, K, P, U
If age = 5, then grade equivalent = -1, N, T, K, P, 1, U
If age = 6, then grade equivalent = -1, N, T, K, P, 1, 2, U
If age = 7, then grade equivalent = -1, T, K, P, 1, 2, 3, U
If age = 8, then grade equivalent = -1, 1, 2, 3, 4, U
If age = 9, then grade equivalent = -1, 2, 3, 4, 5, U
If age = 10, then grade equivalent = -1, 2, 3, 4, 5, 6, U
If age = 16, then grade equivalent = -1, 9, 10, 11, 12, U
If age = 17, then grade equivalent = -1, 10, 11, 12, U, 15, 16, 17
If age >= 18, then grade equivalent = -1, 11, 12, U, 15, 16, 17

S14. *Relationship between child and most knowledgeable parent/guardian*

If S14 = 1, 2, then parent's age = > (child's age + 12)
If S14 = 4, then parent's age = > (child's age + 24)
If S14 = 1, then parent's gender = F
If S14 = 2, then parent's gender = M

Expanded Screener

SX9. *Grade or year person is attending*

If age = 3 - 4, then grade = -1, N, T, K, P, U, S
If age = 5, then grade = -1, N, T, K, P, 1, U, S
If age = 6, then grade = -1, N, T, K, P, 1, 2, U, S
If age = 7, then grade = -1, T, K, P, 1, 2, 3, U, S
If age = 8, then grade = -1, 1, 2, 3, 4, U, S
If age = 9, then grade = -1, 2, 3, 4, 5, U, S
If age = 10, then grade = -1, 3, 4, 5, 6, U, S
If age = 11, then grade = -1, 4, 5, 6, 7, U, S
If age = 12, then grade = -1, 5, 6, 7, 8, U, S
If age = 13, then grade = -1, 6, 7, 8, 9, U, S
If age = 14, then grade = -1, 7, 8, 9, 10, U, S
If age = 15, then grade = -1, 8, 9, 10, 11, U, S
If age = 16, then grade = -1, 9, 10, 11, 12, U, S
If age = 17, then grade = -1, 10, 11, 12, U, S, 15, 16, 17
If age = > 18, then grade = -1, 11, 12, U, S, 15, 16, 17

SX10. *Grade equivalent*

If age = 3 - 4, then grade equivalent = -1, N, T, K, P, U
If age = 5, then grade equivalent = -1, N, T, K, P, 1, U
If age = 6, then grade equivalent = -1, N, T, K, P, 1, 2, U
If age = 7, then grade equivalent = -1, T, K, P, 1, 2, 3, U
If age = 8, then grade equivalent = -1, 1, 2, 3, 4, U
If age = 9, then grade equivalent = -1, 2, 3, 4, 5, U
If age = 10, then grade equivalent = -1, 3, 4, 5, 6, U
If age = 11, then grade equivalent = -1, 4, 5, 6, 7, U
If age = 12, then grade equivalent = -1, 5, 6, 7, 8, U
If age = 13, then grade equivalent = -1, 6, 7, 8, 9, U
If age = 14, then grade equivalent = -1, 7, 8, 9, 10, U
If age = 15, then grade equivalent = -1, 8, 9, 10, 11, U
If age = 16, then grade equivalent = -1, 9, 10, 11, 12, U
If age = 17, then grade equivalent = -1, 10, 11, 12, U, 15, 16, 17
If age = > 18, then grade equivalent = -1, 11, 12, U, 15, 16, 17

SX13. *Highest grade or year of school completed*

If age = 16, then SX13 = -1, 1, 2, 3, 4, 5, 6
If age = 17, 18 then SX13 = -1, 1, 2, 3, 4, 5, 6, 7
If age = 19, then SX13 = -1, 1, 2, 3, 4, 5, 6, 7, 8
If age = 20, then SX13 = -1, 1, 2, 3, 4, 5, 6, 7, 8, 9
If age = 21 then SX13 = -1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
If age = > 22 then SX13 = -1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13

SX18.* *Country of birth*

If SX18 = 2 (not everyone in the household was born in the U.S.), for at least one person in the household SX20 should not equal 1=50 states or the District of Columbia.

SX19. *English as a first language*

If SX19 = 2 (not everyone in the household learned English as their first language), for at least one person in the household SX21 should not equal 1=English.

SX24. *Relationship between child and most knowledgeable parent/guardian*

If S14 = 1, 2, then parent's age = > (child's age + 12)
If S14 = 4, then parent's age = > (child's age + 24)
If S14 = 1, then parent's gender = F
If S14 = 2, then parent's gender = M

K3_P3. *Number of additional telephone numbers for home use*

0 - 9 (hard range)
0 - 3 (soft range)

K3B_P3B. *Total amount of time without telephone service in the past 12 months*

Days: 1 - 365 (hard range)
Weeks: 1 - 52 (hard range)
Months: 1 - 12 (hard range)

K7_P7OV2.* *Number in Household*

Number in household (HHNUM) should equal the total number of people enumerated as household members in S6.

Household income to the nearest thousand

If (Number in HH = 2 and K7_P7OV (HINCOME) = 2) or
(Number in HH = 3 and K7_P7OV = 3) or
(Number in HH = 4 and K7_P7OV = 3) or
(Number in HH = 5 and K7_P7OV = 4) or
(Number in HH = 6 and K7_P7OV = 4) or
(Number in HH = 7 and K7_P7OV = 5) or
(Number in HH = 8 and K7_P7OV = 5) or
(Number in HH = 9 and K7_P7OV = 6) or
(Number in HH = 10 and K7_P7OV = 6) or
(Number in HH = 11 and K7_P7OV = 7) or
(Number in HH = 12 and K7_P7OV = 7) then
K7_P7OV2 must have been asked (HINCMEXT cannot = -1)

Response must fall within the range reported at K7_P7OV.

Early Childhood Program Participation

A1. *Month and year of child's birth*

Month: 1 - 12 (hard range)
Year:1984 - 1995 (all entries confirmed in A2)

A6. *Relationships of household members to child*

If A6 = 1, 2, then parent's age = > (AGE94 + 12)
If A6 = 4, then parent's age = > (AGE94 + 24)
If A6 = 1, then parent's gender = F
If A6 = 2, then parent's gender = M
For each child, only 1 household member can have A6 = 1
For each child, only 1 household member can have A6 = 2

A11. *Grade or year child is attending*

If AGE94 = 3 - 4, then grade = -1, N, T, K, P, U, S
If AGE94 = 5, then grade = -1, N, T, K, P, 1, U, S
If AGE94 = 6, then grade = -1, N, T, K, P, 1, 2, U, S
If AGE94 = 7, then grade = -1, T, K, P, 1, 2, 3, U, S
If AGE94 = 8, then grade = -1, 1, 2, 3, 4, U, S
If AGE94 = 9, then grade = -1, 2, 3, 4, 5, U, S
If AGE94 = 10, then grade = -1, 3, 4, 5, U, S

A12. *Grade equivalent*

If AGE94 = 3 - 4, then grade equivalent = -1, N, T, K, P, U
If AGE94 = 5, then grade equivalent = -1, N, T, K, P, 1, U
If AGE94 = 6, then grade equivalent = -1, N, T, K, P, 1, 2, U
If AGE94 = 7, then grade equivalent = -1, T, K, P, 1, 2, 3, U
If AGE94 = 8, then grade equivalent = -1, 1, 2, 3, 4, U
If AGE94 = 9, then grade equivalent = -1, 2, 3, 4, 5, U
If AGE94 = 10, then grade equivalent = -1, 3, 4, 5, U

Consistency check on school history among children ever home schooled:

If A13 = 1 (ever attended a school), then A15 through A18 cannot all equal 2 (only went to home school)

If A14 = 1 (ever home schooled), then A15 through A18 cannot all equal 1 (only attended a school).

*** Consistency check on schooling situation for current grade if home schooled:**

If A10 = 1 (currently home schooled) and A12 = K (grade equivalent is kindergarten) then A15 cannot = 1 (only school)

If A10 = 1 (currently home schooled) and A12 = 1 (grade equivalent is first grade) then A16 cannot = 1 (only school)

If A10 = 1 (currently home schooled) and A12 = 2 (grade equivalent is second grade) then A17 cannot = 1 (only school)

If A10 = 1 (currently home schooled) and A12 = 3 (grade equivalent is third grade) then A18 cannot = 1 (only school)

B2. *Age of child when first started kindergarten/prefirst grade*

Years: [maximum of current age]
3 - 7 (hard range)
4 - 6 (soft range)
Months: 0 - 11 (hard range)

B3. *Did child attend one or two years of kindergarten (ECPATH = S only)*

The response to B3 must be equal to or less than child's current age minus the age he/she started kindergarten.

For example, if the child is currently age 6 and started kindergarten at age 5, the response to B3 must be one. Or, if the child is currently age 8 and started kindergarten at age 6, the response to B3 may be either one or two, but no greater.

B10. *Number of days each week child attends kindergarten*

1 - 7 (hard range)
1 - 5 (soft range)

B11. *Number of hours each week child attends kindergarten*

6 - 45 (hard range)
10 - 35 (soft range)

B13. *Number of hours each week spent in kindergarten (less any before/after school care)*

The number of hours reported here must be less than or equal to that reported in B11.

C1. *Age of child when started first grade*

Years: [maximum of current age]
4 - 9 (hard range)
5 - 7 (soft range)
Months: 0 - 11 (hard range)

C8. *Number of hours each week child attends primary school*

6 - 45 (hard range)
25 - 35 (soft range)

C12. *Has child repeated any grades since starting first grade*

If grade = 1 and AGE94 = 5, 6, then C12 should = 2.
If grade = 2 and AGE94 = 6, 7, then C12 should = 2.
If grade = 3 and AGE94 = 7, 8, then C12 should = 2.

D3. *Age of child when first received care from a relative on a regular basis*

Years: 0 - current age
Months: 0 - 24 [maximum of current age]

If years > 0, then months must be < 12.
If years = 0, then months must be >= 0.

D4OV. *Number of different arrangements with relatives (if more than 1)*

2 - 4 (hard range)

D5OV. *Age of brother or sister caregiver*

6 - 30 (hard range)
10 - 21 (soft range)

D7. *Does relative care provider live in child's household*

If D7 = yes and D5 = grandparent, there must be a grandparent of the child in the household.

If D7 = yes and D5 = brother or sister, there must be a sibling of the child in the household.

In all other cases where D7 = yes, there must be another relative in the household other than the mother or father who is related to the subject child.

D10. *Number of days each week child is cared for by relative*

1 - 7 (hard range)
1 - 5 (soft range)

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D11, D11C. *Number of hours each week child is cared for by a relative*

For full day kindergarten & primary children [(ECPATH = K and B8 = 1) or (ECPATH = S)]:

1 - 40 (hard range)
1 - 20 (soft range)

For part day kindergarten children (ECPATH = K and B8 = 2 or 3):

1 - 60 (hard range)
1 - 35 (soft range)

For all other children:

1 - 70 (hard range)
1 - 50 (soft range)

D11A. *Number of weeks each month child is cared for by a relative*

1 - 4 (hard range)
1 - 3 (soft range)

D11B. *Number of days each week child is cared for by a relative*

1 - 7 (hard range)
1 - 5 (soft range)

D13. *Number of children cared for together by relative*

1 - 10 (hard range)
1 - 5 (soft range)

D14. *Number of adults who usually care for child*

1 - 8 (hard range)
1 - 4 (soft range)

Check on child/staff ratio:

0.5:1 to 8:1 (hard range)
1:1 to 5:1 (soft range)

D15. *Age at which current relative care arrangement began*

Years: 0 - current age
Months: 0 - 24 [maximum of current age]

If years > 0, then months must be < 12.
If years = 0, then months must be >= 0.

Age must be greater than or equal to that in D3.

D20. *Cost of relative care to child's household*

per hour:	.50 - 10.00 (hard range)
	1.00 - 6.00 (soft range)
per day:	1.00 - 50.00 (hard range)
	1.00 - 10.00 (soft range)
per week:	5.00 - 200.00 (hard range)
	10.00 - 100.00 (soft range)
per month:	20.00 - 400.00 (hard range)
	40.00 - 240.00 (soft range)
per year:	240.00 - 4,800.00 (hard range)
	480.00 - 2,000.00 (soft range)

Consistency check on cost series:

If D18 = 1 (there is a fee), and D19a-d = 2 (no assistance), then D20 cannot = 0 (no cost to household).

D21OV. *Number of children cost of relative care applies to*

This number cannot exceed the number of children age 12 or younger enumerated in the household.

2 - 12 (hard range)
2 - 6 (soft range)

E3. *Age of child when first received care from a nonrelative on a regular basis*

Years: 0 - current age
Months: 0 - 24 [maximum of current age]

If years > 0, then months must be < 12.
If years = 0, then months must be >= 0.

E4OV. *Number of different arrangements with nonrelatives (if more than 1)*

2 - 4 (hard range)

E6. *Does nonrelative care provider live in child's household*

If yes, there must be someone in the household whose relationship to the child is a nonrelative.

E9. *Number of days each week child is cared for by nonrelative*

1 - 7 (hard range)
1 - 5 (soft range)

E10, E10C. *Number of hours each week child is cared for by nonrelative*

For full day kindergarten & primary children [(ECPATH = K and B8 = 1) or (ECPATH = S)]:

1 - 40 (hard range)
1 - 20 (soft range)

For part day kindergarten children (ECPATH = K and B8 = 2 or 3):

1 - 60 (hard range)
1 - 35 (soft range)

For all other children:

1 - 70 (hard range)
1 - 50 (soft range)

E10A. *Number of weeks each month child is cared for by a nonrelative*

1 - 4 (hard range)
1 - 3 (soft range)

E10B. *Number of days each week child is cared for by a nonrelative*

1 - 7 (hard range)
1 - 5 (soft range)

E12. *Number of children cared for together by nonrelative*

1 - 15 (hard range)
1 - 8 (soft range)

E13. *Number of adults who usually care for child*

1 - 8 (hard range)
1 - 4 (soft range)

Check on child/staff ratio:

1:1 to 8:1 (hard range)
1:1 to 5:1 (soft range)

E14. *Age at which current nonrelative care arrangement began*

Years: 0 - current age
Months: 0 - 24 [maximum of current age]

If years > 0, then months must be < 12.
If years = 0, then months must be >= 0.

Age must be greater than or equal to age that in E3.

E20. *Cost of nonrelative care to child's household*

per hour:	1.00 - 10.00 (hard range)
	1.00 - 6.00 (soft range)
per day:	3.00 - 100.00 (hard range)
	10.00 - 40.00 (soft range)
per week:	5.00 - 500.00 (hard range)
	30.00 - 200.00 (soft range)
per month:	30.00 - 2,000.00 (hard range)
	120.00 - 800.00 (soft range)
per year:	360.00 - 20,000.00 (hard range)
	1400.00 - 5,000.00 (soft range)

Consistency check on cost series:

If E18 = 1 (there is a fee), and E19a-d = 2 (no assistance), then E20 cannot = 0 (no cost to household).

E21OV. *Number of children cost of nonrelative care applies to*

This number cannot exceed the number of children age 12 or younger enumerated in the household.

2 - 12 (hard range)
2 - 6 (soft range)

F3. *Age of child when first attended Head Start*

Years:	2 - current age [maximum of 6] (hard range)
	3 - 5 (soft range)
Months:	0 - 11 (hard range)

F10. *Number of days each week child attends Head Start*

1 - 7 (hard range)
1 - 5 (soft range)

F11, F11C. *Number of hours each week child attends Head Start program*

1 - 70 (hard range)
1 - 50 (soft range)

F11A. *Number of weeks each month child attends Head Start program*

1 - 4 (hard range)
1 - 3 (soft range)

F11B. *Number of days each week child attends Head Start program*

1 - 7 (hard range)
1 - 5 (soft range)

Consistency check on average hours per day (F12) and full/part day program (F9):

If F12 = 1 (correct) and average hours < 5, then F9 should = 2 (part day).
If F12 = 1 (correct) and average hours > 6, then F9 should = 1 (full day).

F14. *Number of hours each week child attends Head Start program (less any before/after care)*

The number reported here must be less than or equal to that reported in F11.

F15. *Number of children cared for in same room or group at Head Start program*

1 - 40 (hard range)
5 - 20 (soft range)

F16. *Number of adults in room or group at the Head Start program*

1 - 10 (hard range)
1 - 4 (soft range)

Check on child/staff ratio:

1:1 to 20:1 (hard range)
3:1 to 12:1 (soft range)

F17. *Age at which began going to current Head Start program*

Years:	2 - current age [maximum of 6] (hard range) 3 - 5 (soft range)
Months:	0 - 11 (hard range)

Age must be greater than or equal to that in F3.

F27. *Cost of Head Start program to child's household*

per hour: .00 - 10.00 (hard range)
.00 - 6.00 (soft range)
per day: .00 - 40.00 (hard range)
.00 - 10.00 (soft range)
per week: .00 - 100.00 (hard range)
.00 - 60.00 (soft range)
per month: .00 - 400.00 (hard range)
.00 - 240.00 (soft range)
per year: .00 - 4,800.00 (hard range)
.00 - 2,000.00 (soft range)

Consistency check on cost series:

If F25 = 1 (there is a fee), and F26a-d = 2 (no assistance), then F27 cannot = 0 (no cost to household).

F28OV. *Number of children cost of Head Start program applies to*

This number cannot exceed the number of children age 12 or younger enumerated in the household.

2 - 12 (hard range)
2 - 6 (soft range)

G4. *Age of child when first attended a center-based program (ECPATH = I, N)*

Years: 0 - current age
Months: 0 - 24 [maximum current age]

If years > 0, then months must be < 12.
If years = 0, then months must be >= 0.

G5. *Number of center-based programs child currently goes to (ECPATH = I, N)*

1 - 4 (hard range)
1 - 2 (soft range)

G6. *Is child attending a day care or before/after school program (ECPATH = K, S, or H)*

If B12 = 2 (kindergarten program includes before/after school care) then G6 should = 1 (yes).

G8. *Age of child when first attended a center-based program (ECPATH = K, S, H)*

Years: 0 - current age (hard range)
Months: 0 - 24 [maximum of current age] (hard range)

If year > 0, then months must be < 12.
If year = 0, then months must be >= 0.

G9. *Number of center-based programs child currently goes to (ECPATH = K, S, H)*

1 - 4 (hard range)
1 - 2 (soft range)

G16. *Number of days each week child attends center-based program*

1 - 7 (hard range)
1 - 5 (soft range)

G17, G17C. *Number of hours each week child attends center-based program*

For full day kindergarten & primary children [(ECPATH = K and B8 = 1) or (ECPATH = S)]:

1 - 40 (hard range)
1 - 20 (soft range)

For part day kindergarten children (ECPATH = K and B8 = 2 or 3):

1 - 60 (hard range)
1 - 35 (soft range)

For all other children:

1 - 70 (hard range)
1 - 50 (soft range)

G17A. *Number of weeks each month child attends center-based program*

1 - 4 (hard range)
1 - 3 (soft range)

G17B. *Number of days each week child attends center-based program*

1 - 7 (hard range)
1 - 5 (soft range)

Consistency check on average hours per day (G18) and full/part day program (G14):

If G18 = 1 (correct) and average hours < 5, then G14 should = 2 (part day).
If G18 = 1 (correct) and average hours > 6, then G14 should = 1 (full day).

G19. *Number of children cared for in same room or group at the center-based program*

1 - 40 (hard range)
5 - 25 (soft range)

G20. *Number of adults in room or group at the center-based program*

1 - 10 (hard range)
1 - 5 (soft range)

Check on child/staff ratio:

1:1 to 20:1 (hard range)
3:1 to 12:1 (soft range)

G21. *Age at which current center-based care arrangement began*

Years: 0 - current age (hard range)
Months: 0 - 24 [maximum of current age] (hard range)

If year > 0, then months must be < 12.
If year = 0, then months must be >= 0.

Age must be greater than or equal to that in G4/G8.

G31. *Cost of center-based program to child's household*

per hour:	1.00 - 10.00 (hard range)
	1.00 - 6.00 (soft range)
per day:	3.00 - 100.00 (hard range)
	10.00 - 40.00 (soft range)
per week:	5.00 - 500.00 (hard range)
	30.00 - 200.00 (soft range)
per month:	30.00 - 2,000.00 (hard range)
	120.00 - 800.00 (soft range)
per year:	360.00 - 20,000.00 (hard range)
	1400.00 - 5,000.00 (soft range)

Consistency check on cost series:

If G29 = 1 (there is a fee), and G30a-d = 2 (no assistance), then G31 cannot = 0 (no cost to household).

G32OV. *Number of children cost of center-based care applies to*

This number cannot exceed the number of children age 12 or younger enumerated in the household.

2 - 12 (hard range)
2 - 6 (soft range)

H1.* *Total hours cared for per week*

For full day kindergarten, primary children and home-schooled children [(ECPATH = K and B8 = 1) or (ECPATH = S,H)]:

1 - 40 (hard range)

For all other children:

1 - 70 (hard range)

J1C. *Number of weeks each month child cares for self*

1 - 4 (hard range)
1 - 3 (soft range)

J1D. *Number of days each week child cares for self*

1 - 7 (hard range)
1 - 5 (soft range)

J1E. *Number of hours each week child cares for self*

1 - 40 (hard range)
1 - 20 (soft range)

J2. *Number of days each week child cares for self*

1 - 7 (hard range)
1 - 5 (soft range)

J3. *Number of hours each week child cares for self*

1 - 40 (hard range)
1 - 20 (soft range)

K2. *Number of arrangements/programs since last September*

1 - 4 (hard range)
1 - 2 (soft range)

K5. *Start and end date of previous arrangement*

Start dates must be later than child's birth date.

End months must fall within the range September -- month of interview

If end month = September--December, end year must = 1994
If end month = January -- interview month, end year must = 1995

The end date must be later than or equal to the start date.

K6. *Previous arrangement--number of days each week*

1 - 7 (hard range)
1 - 5 (soft range)

K7. *Previous arrangement--number of hours each week*

1 - 70 (hard range)
1 - 50 (soft range)

N4. *Age first became a mother/stepmother/guardian*

13 - 45 (hard range)
15 - 40 (soft range)

Age cannot be greater than current age.

N9. *Age mother first moved to U.S.*

The age reported must be less than or equal to mother's current age.

1 - 80 (hard range)
1 - 40 (soft range)

N14. *Hours per week mother usually works for pay*

1 - 99 (hard range)
1 - 60 (soft range)

N15. *Mother's earnings*

per hour:	1.00 - 40.00 (hard range)
	1.00 - 25.00 (soft range)
per day:	1.00 - 350.00 (hard range)
	1.00 - 200.00 (soft range)
per week:	10.00 - 2,000.00 (hard range)
	50.00 - 1,000.00 (soft range)
bi-weekly:	20.00 - 4,000.00 (hard range)
	100.00 - 2,000.00 (soft range)
per month:	40.00 - 10,000.00 (hard range)
	200.00 - 5,000.00 (soft range)
per year:	500.00 - 300,000.00 (hard range)
	1,000.00 - 100,000.00 (soft range)

N16. *Number of months mother worked for pay in past 12 months*

0 - 12 (hard range)
Cannot equal 0 if mother was employed last week for pay.

N22. *Number of hours mother attends school or training per week*

1 - 50 (hard range)
1 - 25 (soft range)

N14, N22.* *Cross check on hours per week worked and attended school or training*

Sum of hours worked per week in N14 and hours attended school or training per week in N22:

1 - 90 (hard range)

N23, N25. *Primary and secondary care arrangements*

The responses to N23 and N25 must be different.

O5. *Age father first moved to U.S.*

The age reported must be less than or equal to the father's current age.

1 - 80 (hard range)
1 - 40 (soft range)

O10. *Hours per week father usually works for pay*

1 - 99 (hard range)
1 - 60 (soft range)

O16. *Number of hours father attends school or training per week*

1 - 50 (hard range)
1 - 25 (soft range)

O10, O16.* *Cross check on hours per week worked and attended school or training*

Sum of hours worked per week in O10 and hours attended school or training per week in O16:

1 - 90 (hard range)

P3. *Number of additional telephone numbers for home use*

0 - 9 (hard range)
0 - 3 (soft range)

P3B. *Total amount of time without telephone service in the past 12 months*

Days:	1 - 365 (hard range)
Weeks:	1 - 52 (hard range)
Months:	1 - 12 (hard range)

P4. *ZIP code*

Match first three digits to three digit ZIP code loaded with list-assisted sample from Genesys. Edit will allow respondent to verify their response.

P7OV2.* *Number in Household*

Number in household (HHNUM) should equal the total number of people enumerated as household members in S6.

Household income to the nearest thousand

If (Number in HH = 2 and P7OV (HINCOME) = 2) or
(Number in HH = 3 and P7OV = 3) or
(Number in HH = 4 and P7OV = 3) or
(Number in HH = 5 and P7OV = 4) or
(Number in HH = 6 and P7OV = 4) or
(Number in HH = 7 and P7OV = 5) or
(Number in HH = 8 and P7OV = 5) or
(Number in HH = 9 and P7OV = 6) or
(Number in HH = 10 and P7OV = 6) or
(Number in HH = 11 and P7OV = 7) or
(Number in HH = 12 and P7OV = 7) then
P7OV2 must have been asked (HINCMEXT cannot = -1)

Response must fall within the range reported at P7OV.

Adult Education

A8. *Number of employers in the past 12 months*

1 - 12 (hard range)
1 - 4 (soft range)

C5. *Number of weeks to attend ESL*

Days:	1 - 365 (hard range) 1 - 30 (soft range)
Weeks:	1 - 52 (hard range) 1 - 20 (soft range)
Months:	1 - 12 (hard range)
Semesters:	1 - 3 (hard range)
Quarters:	1 - 4 (hard range)

C5OV. *Number of weeks to attend ESL (other specify)*

1 - 50 (hard range)
1 - 30 (soft range)

C7. *Number of hours to attend ESL*

Days:	1 - 15 (hard range) 1 - 8 (soft range)
Weeks:	1 - 50 (hard range) 1 - 40 (soft range)

C8. *Amount of your own money paid for tuition, books, and other expenses to attend ESL*

0 - 3,000 (hard range)
0 - 500 (soft range)

B5. *Number of weeks to attend ABE/GED*

Days: 1 - 365 (hard range)
1 - 30 (soft range)

Weeks: 1 - 52 (hard range)
1 - 20 (soft range)

Months: 1 - 12 (hard range)

Semesters: 1 - 3 (hard range)

Quarters: 1 - 4 (hard range)

B5OV. *Number of weeks to attend ABE/GED (other specify)*

1 - 50 (hard range)
1 - 30 (soft range)

B7. *Number of hours to attend ABE/GED*

Per day: 1 - 15 (hard range)
1 - 8 (soft range)

Per week: 1 - 50 (hard range)
1 - 40 (soft range)

B8. *Amount of your own money paid for tuition, books, and other expenses to attend ABE/GED*

0 - 3,000 (hard range)
0 - 500 (soft range)

D2. *Number of degree, diploma, or certificate programs in the past 12 months*

1 - 10 (hard range)
1 - 3 (soft range)

D7a. *Number of months to attend credential programs on a full-time basis in the past 12 months*

0 - 12 (hard range)

D7b. *Number of months to attend credential programs on a part-time basis in the past 12 months*

0 - 12 (hard range)
D7a + D7b should be greater than 0.

D8. *Number of courses taken for the credential in the past 12 months*

1 - 30 (hard range)
1 - 15 (soft range)

D9. *Number of credential courses as a part-time student in the past 12 months*

0 - 30 (hard range)
0 - 15 (soft range)

Number of courses should be less than or equal to D8.

D11. *How long the vocational diploma or certificate program lasts*

Hours: 1 - 24 (hard range)

Days: 1 - 365 (hard range)
1 - 30 (soft range)

Weeks: 1 - 52 (hard range)
1 - 20 (soft range)

Months: 1 - 12 (hard range)

Years: 1 - 8 (hard range)
1 - 5 (hard range)

D12a. *Number of hours per week to attend credential programs on a full-time basis*

0 - 50 (hard range)

D12b. *Number of hours per week to attend credential programs on a part-time basis*

0 - 50 (hard range)
0 - 25 (soft range)

D13. *Amount of your own money paid for tuition, books, and other expenses to attend credential programs*

0 - 50,000 (hard range)
0 - 30,000 (soft range)

E5. *How long the apprenticeship program lasts*

Weeks: 1 - 52 (hard range)
1 - 20 (soft range)

Months: 1 - 12 (hard range)

Years: 1 - 10 (hard range)
1 - 5 (soft range)

E6. *Number of hours per week for on-the-job training*

0 - 60 (hard range)
0 - 40 (soft range)

E7. *Number of hours per week for formal classroom instruction*

0 - 60 (hard range)
0 - 40 (soft range)

F3. *Number of career or job related courses in the past 12 months*

1 - 25 (hard range)
1 - 6 (soft range)

F9. *Number of weeks to attend career or job related courses*

Days: 1 - 365 (hard range)
1 - 30 (soft range)

Weeks: 1 - 52 (hard range)
1 - 20 (soft range)

Months: 1 - 12 (hard range)

Semesters: 1 - 3 (hard range)

Quarters: 1 - 4 (hard range)

F9OV. *Number of weeks to attend career or job related courses (other specify)*

1 - 50 (hard range)
1 - 30 (hard range)

F12. *Number of hours to attend career or job related courses*

Per day: 1 - 15 (hard range)
1 - 8 (soft range)

Per week: 1 - 50 (hard range)
1 - 40 (soft range)

F13. *Amount of your own money paid for tuition, books, and other expenses to attend career or job related courses*

0 - 20,000 (hard range)
0 - 5,000 (soft range)

G3. *Number of other structured courses in the past 12 months*

1 - 20 (hard range)
1 - 6 (soft range)

G5. *Amount of your own money paid for tuition, fees, and other expenses to attend other structured courses*

0 - 20,000 (hard range)
0 - 2,500 (soft range)

G6. *Number of weeks to attend other structured courses*

Days: 1 - 365 (hard range)
1 - 30 (soft range)

Weeks: 1 - 52 (hard range)
1 - 20 (soft range)

Months: 1 - 12 (hard range)

Semesters: 1 - 3 (hard range)

Quarters: 1 - 4 (hard range)

G6OV. *Number of weeks to attend other structured courses (other specify)*

1 - 50 (hard range)
1 - 30 (soft range)

G6A. *Number of hours to attend other structured courses*

Per day: 1 - 15 (hard range)
1 - 8 (soft range)

Per week: 1 - 50 (hard range)
1 - 40 (soft range)

I3. *Number of computer-only activities in the past 12 months*

1 - 30 (hard range)
1 - 10 (hard range)

I5. *Average hours spent on each computer-only activity*

1 - 150 (hard range)
1 - 50 (soft range)

J1. *Month and year born*

Month: 1 - 12 (hard range)

Year: 1 - 78 (hard range)
20 - 78 (soft range)

J7. *Age first moved to the U.S.*

1 - 80 (hard range)
1 - 40 (soft range)

Age must be less than or equal to current age using J1 birth date.

J10. *Year discharged from active duty*

40 - 95 (hard range)

Year should be greater than or equal to (J1 year+16).

J16. *What have you been doing in the past 4 weeks?*

At least one of J16 should not be 2.

J21. *Month and year left last job*

Month: 1 - 12 (hard range)

Year: 40 - 95 (hard range)
75 - 95 (soft range)

Year should be greater than or equal to (J1 year+12).

J20. *How long worked for current/most recent employer*

Weeks: 1 - 52 (hard range)
1 - 12 (soft range)

Months: 1 - 12 (hard range)

Years: 1 - 50 (hard range)
1 - 30 (soft range)

J23. *Number of months worked in the past 12 months*

1 - 12 (hard range)

J26. *Number of total hours work for pay*

1 - 99 (hard range)
1 - 60 (soft range)

J28. *Earnings*

Per hour: 1 - 40 (hard range)
1 - 25 (soft range)
Per day: 1 - 350 (hard range)
1 - 200 (soft range)
Per week: 10 - 2,000 (hard range)
50 - 1,000 (soft range)
Per bi-weekly: 20 - 4,000 (hard range)
100 - 2,000 (soft range)
Per month: 40 - 10,000 (hard range)
200 - 5,000 (soft range)
Per year: 500 - 300,000 (hard range)
1,000 - 100,000 (soft range)

K3. *Number of additional telephones for home use*

0 - 9 (hard range)
0 - 3 (soft range)

K3B. *Total amount of time without telephone service in the past 12 months*

Days: 1 - 365 (hard range)

Weeks: 1 - 52 (hard range)

Months: 1 - 12 (hard range)

K4. *ZIP Code*

Match first three digits to three digit ZIP code loaded with list-assisted sample from Genesys. Edit will allow respondent to verify their response.

K7OV2.* *Number in Household*

Number in household (HHNUM) should equal the total number of people enumerated as household members in S6.

Household income to the nearest thousand

If (Number in HH = 2 and K7OV (HINCOME) = 2) or
(Number in HH = 3 and K7OV = 3) or
(Number in HH = 4 and K7OV = 3) or
(Number in HH = 5 and K7OV = 4) or
(Number in HH = 6 and K7OV = 4) or
(Number in HH = 7 and K7OV = 5) or
(Number in HH = 8 and K7OV = 5) or
(Number in HH = 9 and K7OV = 6) or
(Number in HH = 10 and K7OV = 6) or
(Number in HH = 11 and K7OV = 7) or
(Number in HH = 12 and K7OV = 7) then
K7OV2 must have been asked (HINCMEXT cannot = -1)

Response must fall within the range reported at K7OV.

Adult Education Splice Sample

A3. *Number of courses taken as a full-time student*

1 - 25 (hard range)
1 - 10 (soft range)

A7. *Number of credit courses taken as a part-time student*

1 - 25 (hard range)
1 - 10 (soft range)

C3. *Number of additional telephones for home use*

0 - 9 (hard range)
0 - 3 (soft range)

C5. *Total amount of time without telephone service in the past 12 months*

Days:	1 - 365 (hard range)
Weeks:	1 - 52 (hard range)
Months:	1 - 12 (hard range)

C6. *ZIP Code*

Match first three digits to three digit ZIP code loaded with list-assisted sample from Genesys. Edit will allow respondent to verify their response.

C7OV2.* *Number in Household*

Number in household (HHNUM) should equal the total number of people enumerated as household members in S6.

Household income to the nearest thousand

If (Number in HH = 2 and C7OV (HINCOME) = 2) or
(Number in HH = 3 and C7OV = 3) or
(Number in HH = 4 and C7OV = 3) or
(Number in HH = 5 and C7OV = 4) or
(Number in HH = 6 and C7OV = 4) or
(Number in HH = 7 and C7OV = 5) or
(Number in HH = 8 and C7OV = 5) or
(Number in HH = 9 and C7OV = 6) or
(Number in HH = 10 and C7OV = 6) or
(Number in HH = 11 and C7OV = 7) or
(Number in HH = 12 and C7OV = 7) then
C7OV2 must have been asked (HINCMEXT cannot = -1)

Response must fall within the range reported at C7OV.

Attachment 2
Edits for Structural Completeness

The structural edits were run against completed interviews only. The completion codes (database variables SCRN.SCRNRSLT for screener completes and BASM.MAINRSLT for extended completes) are as follows:

Screener (SCRN.SCRNRSLT)

C0	Complete standard screener with no extended interviews
CA	Complete standard screener with Adult Education interview(s) only
CC	Complete standard screener with ECPP interview(s) only
CB	Complete standard screener with both Adult Education and ECPP interviews
C1	Complete expanded screener with no extended interviews
C3	Complete expanded screener with Adult Education interview(s) only
C2	Complete expanded screener with ECPP interview(s) only
C4	Complete expanded screener with both Adult Education and ECPP interviews

Adult Education (BASM.MAINRSLT)

CP	Complete AE interview; sampled as participant, completed as participant
CU	Complete AE interview; sampled as non-participant, completed as non-participant
CX	Complete AE interview; sampled as participant, completed as non-participant
CY	Complete AE interview; sampled as non-participant, completed as participant

Early Childhood Program Participation (BASM.MAINRSLT)

CI	Complete ECPP interview for an infant
CN	Complete ECPP interview for a preschooler
CK	Complete ECPP interview for a kindergartner
CS	Complete ECPP interview for a primary school student
CH	Complete ECPP interview for a home schooler

Splice Sample (BASM.MAINRSLT)

CL	Complete Splice interview, participant
CV	Complete Splice interview, non-participant

The structural edits were grouped into four categories as described below. Edits noted with an asterisk (*) were added or modified based on data collection experience after the Data Editing Plan was delivered.

A. Interview Completeness

These edits confirmed the completeness of the database. In other words, if there was a completed interview, all of the appropriate data records associated with that type of interview were checked for existence.

A1. Screeners completed with only ECPP interviews (SCRN.SCRNRSLT = CC or C2) must have only ECPP extendeds (SELECTEX = SC [sampled child] for all BASM records).

A2. Screeners completed with only AE or Splice interviews (SCRN.SCRNRSLT = CA or C3) must have only AE or Splice extendeds (SELECTEX = HP [high education AE participant], HU [high education AE non-participant], LP [low education AE participant], or LU [low education AE non-participant] or AS [sampled for Splice]).

A3. Screeners completed with both ECPP and AE or Splice interviews (SCRN.SCRNRSLT = CB or C4) must have at least one ECPP extended (BASM record with SELECTEX = SC) and at least one AE or Splice extended (BASM record with SELECTEX = HP, HU, LP, or LU [if not Splice] or AS [if Splice]).

A4. Screeners completed with no extended interviews (SCRN.SCRNRSLT = C0 or C1) must have no extendeds (no BASM records).

A5. Completed screeners (SCRN.SCRNRSLT = C0, CA, CB, CC, C1, C2, C3 or C4) that were sampled to complete the Library items (SCRN.LIBRARY = 1) must have one and only one LIBR record.

A6. All households in which there has been one or more completed interviews must have one and only one HOME record.

A7. For each completed ECPP interview (BASM.MAINRSLT = CI, CN, CK, CS, or CH) there must be a DEMO record and a CHIL record.

A8. For each completed AE interview (BASM.MAINRSLT = CU, CP, CX, or CY) there must be an ADLT record.

A9. For each completed Splice interview (BASM.MAINRSLT = CL or CV) there must be a SPLI record.

A10. For each completed ECPP interview (BASM.MAINRSLT = CI, CN, CK, CS, or CH) there must be no ADLT record and no SPLI record.

A11. For each completed Splice interview (BASM.MAINRSLT = CL or CV) there must be no DEMO record, no CHIL record, and no ADLT record.

A12. For each completed AE interview (BASM.MAINRSLT = CU, CP, CX or CY) then there must be no DEMO record, no CHIL record, and no SPLI record.

A13. All households in which there has been one or more completed interviews should have one and only one BASE record and one and only one SCRN record for list-assisted samples (PHONTYPE = 3).

A14. Every ECPP interview in which the child is currently receiving care from a relative on a regular basis (CHIL.RCNOW = 1) must have at least one RELA record.

A15.* The number of RELA segments must match RCARRNEW (a CATI counter variable of the number of relative care arrangements not marked for deletion).

A16. Every ECPP interview in which the child is NOT currently receiving care from a relative on a regular basis (CHIL.RCNOW = 2, miss (-7), miss (-8), miss (-9)) must have no RELA records.

A17. Every ECPP interview in which the child is currently receiving care from a nonrelative on a regular basis (CHIL.NCNOW = 1) must have at least one NREL record.

A18.* The number of NREL segments must match NCARRNEW (a CATI counter variable of the number of nonrelative care arrangements not marked for deletion).

A19. Every ECPP interview in which the child is NOT currently receiving care from a nonrelative on a regular basis (CHIL.NCNOW = 2, miss (-7), miss (-8), miss (-9)) must have no NREL records.

A20. Every ECPP interview in which the child is currently attending Head Start (CHIL.HSNOW = 1) must have one and only one HEAD record.

A21. Every ECPP interview in which the child is NOT currently attending Head Start (CHIL.HSNOW = 2, miss(-7), miss(-8), miss(-9) must have no HEAD records.

A22. Every ECPP interview in which the child is currently attending a center-based arrangement (CHIL.CPNNOW = 1 or CHIL.CPSNOW = 1) must have at least one CENT record.

A23.* The number of CENT segments must match CPARRNEW (a CATI counter variable of the number of center-based care arrangements not marked for deletion).

A24. Every ECPP interview in which the child is NOT currently attending a center-based arrangement (CHIL.CPNNOW = 2, miss(-7), miss(-8), miss(-9) and CHIL.CPSNOW = 2, miss(-7), miss(-8), miss(-9)) must have no CENT records.

A25. Every ECPP interview in which the child has used an arrangement or program on a regular basis since September 1994 (CHIL.PCOTHER = 1) must have at least one PAST record and no more than 2 PAST records.

A26. Every ECPP interview in which the child has NOT used an arrangement or program on a regular basis since September 1994 (CHIL.PCOTHER not = 1) must have no PAST records.

A27. Every AE interview in which the adult has taken basic skills or high school completion courses in the past 12 months (ADLT.BSIMPROV = 1 or ADLT.BSGED = 1 or ADLT.BSHSEQUV = 1) must have one and only one SKIL record.

A28. Every AE interview in which the adult has NOT taken basic skills or high school completion courses in the past 12 months (ADLT.BSIMPROV not = 1 and ADLT.BSGED not = 1 and ADLT.BSHSEQUV not = 1) must have no SKIL records.

A29. Every AE interview in which the adult has taken ESL classes in the past 12 months (ADLT.ESLANG = 1) must have one and only one LANG record.

A30. Every AE interview in which the adult has NOT taken ESL classes in the past 12 months (ADLT.ESLANG not = 1) must have no LANG records.

A31. Every AE interview in which the adult has taken courses toward a credential in the past 12 months (ADLT.CRDEGREE = 1 or ADLT.CRVOCDIP = 1) must have at least one CRED record.

A32. Every AE interview in which the adult has NOT taken courses toward a credential in the past 12 months (ADLT.CRDEGREE not = 1 and ADLT.CRVOCDIP not = 1) must have no CRED records.

A33.* The number of CRED records must match CRDIPNEW (the number of credential programs specified in question D3).

A34. Every AE interview in which the adult has been enrolled in an apprenticeship program in the past 12 months (ADLT.APPRENTI = 1) must have one and only one APPR record.

A35. Every AE interview in which the adult has NOT been enrolled in an apprenticeship program in the past 12 months (ADLT.APPRENTI not = 1) must have no APPR records.

A36. Every AE interview in which the adult has taken work-related courses in the past 12 months (ADLT.WRACTY = 1) must have at least one WORK record.

A37.* The number of WORK records must match WRNEW (the number of work-related courses specified in question F4).

A38. Every AE interview in which the adult has NOT taken work-related courses in the past 12 months (ADLT.WRACTY not = 1) must have no WORK records.

A39. Every AE interview in which the adult has taken other structured courses in the past 12 months (ADLT.SAACTY = 1) must have at least one ACTY record.

A40.* The number of ACTY records must match SANEW (then number of other structured courses specified in question G3).

A41. Every AE interview in which the adult has NOT taken other structured courses in the past 12 months (ADLT.SAACTY not = 1) must have no ACTY records.

A42. Every completed expanded screener (SCRN.SCRNRSLT = C1, C2, C3, C4) must have one and only one XSCR record and an EXPA record for every ENUM record.

A43. If an adult respondent has had more than one employer in the past 12 months (IBEMPL12 >= 2) then the number of EMPL segments for this adult should equal the number of non-missing and non-91 occurrences in the COMPANY array PLUS the number of non-miss(-1) occurrences in PROVARAY. If the adult respondent has NOT had more that one employer in the past 12 months, but has been employed (other than an assistantship) or last worked in 1991 or after, there should be one EMPL segment for this adult.

A44. All completed ECPP infant/toddler interviews (BASM.MAINRSLT = CI) must have ECPATH equal to I.

A45. All completed ECPP preschooler interviews (BASM.MAINRSLT = CN) must have ECPATH equal to N.

A46. All completed ECPP kindergartner interviews (BASM.MAINRSLT = CK) must have ECPATH equal to K.

A47. All completed ECPP primary schooler interviews (BASM.MAINRSLT = CS) must have ECPATH equal to S.

A48. All completed ECPP home schooler interviews (BASM.MAINRSLT = CH) must have ECPATH equal to H.

A49. For completed AE interviews in which the respondent was sampled as a participant and completed as a participant (BASM.MAINRSLT = CP), the following conditions must be true:
The adult must have been sampled as a high-education or low-education participant (SELECTED = HP or LP) AND
The adult must have taken courses of some sort (ESLANG = 1 or BSIMPROV = 1 or BSGED = 1 or BSHSEQUV = 1 or CRDEGREE = 1 or CRVOCDIP = 1 or APPRENTI = 1 or WRACTY = 1 or SAACTY = 1).

A50. For completed AE interviews in which the respondent was sampled as a participant and completed as a non-participant (BASM.MAINRSLT = CX), the following conditions must be true:
The adult must have been sampled as a high-education or low-education participant (SELECTED = HP or LP) AND
The adult must not have taken courses of any sort (ESLANG not = 1 and BSIMPROV not = 1 and BSGED not = 1 and BSHSEQUV not = 1 and CRDEGREE not = 1 and CRVOCDIP not = 1 and APPRENTI not = 1 and WRACTY not = 1 and SAACTY not = 1).

A51. For completed AE interviews in which the respondent was sampled as a non-participant and completed as a participant (BASM.MAINRSLT = CY), the following conditions must be true:
The adult must have been sampled as a high-education or low-education non-participant (SELECTED = HU or LU) AND
The adult must have taken courses of some sort (ESLANG = 1 or BSIMPROV = 1 or BSGED = 1 or BSHSEQUV = 1 or CRDEGREE = 1 or CRVOCDIP = 1 or APPRENTI = 1 or WRACTY = 1 or SAACTY = 1).

A52. For completed AE interviews in which the respondent was sampled as a non-participant and completed as a non-participant (BASM.MAINRSLT = CU), the following conditions must be true:
The adult must have been sampled as a high-education or low-education non-participant (SELECTED = HU or LU) AND
The adult must not have taken courses of any sort (ESLANG not = 1 and BSIMPROV not = 1 and BSGED not = 1 and BSHSEQUV not = 1 and CRDEGREE not = 1 and CRVOCDIP not = 1 and APPRENTI not = 1 and WRACTY not = 1 and SAACTY not = 1).

A53. For Splice interviews in which the respondent completed as a participant (BASM.MAINRSLT = CL), the following conditions must be true:
The adult must have been sampled for a Splice interview (SELECTED = AS) AND
The adult must have taken courses of some sort (FTASSOC = 1 or FTBACHLR = 1 or FTVOCA = 1 or FTBASIC = 1 or FTESL = 1 or FTOTHER = 1 or PTENROLL = 1 or OTCONTED = 1 or OTMEDIA = 1 or OTTUTOR = 1 or OTTRAIN = 1 or OTBASIC = 1 or OTESL = 1 or OTOTHER = 1).

A54. For Splice interviews in which the respondent completed as a non-participant (BASM.MAINRSLT = CV), the following conditions must be true:
The adult must have been sampled for a Splice interview (SELECTED = AS) AND

The adult must not have taken courses of any sort (FTASSOC not = 1 and FTBACHLR not = 1 and FTVOCA not = 1 and FTBASIC not = 1 and FTESL not = 1 and FTOTHER not = 1 and PTENROLL not = 1 and OTCONTED not = 1 and OTMEDIA not = 1 and OTTUTOR not = 1 and OTTRAIN not = 1 and OTBASIC not = 1 and OTESL not = 1 and OTOTHER not = 1).

B. Appropriate Person Records

Every completed interview must have the appropriate associated person records. This includes person records for the subject and for the respondent, as well as for the mother (ECPP), the father (ECPP), and all other household members.

B1. Every BASM record must represent an enumerated, interview-eligible household member (ENUM.PERSNUM = BASM.ENUMNUM and ENUM.ELIGFLG = 1).

B2. All completed ECPP interviews (BASM.MAINRSLT = CI, CN, CK, CS, CH) must have been completed by an enumerated household member and this respondent's sex must match RESPSEX for the child's interview. (There must be an ENUM with ENUM.PERSNUM = ENUM.RESPNUM of child's ENUM and ENUM.SEX = ENUM.RESPSEX of child's ENUM)

B3. If DEMO.MOMNUM not = miss(-1) then there must be an ENUM record with ENUMID = the first 8 digits of DEMOID concatenated with DEMO.MOMNUM.

B4. If DEMO.DADNUM not = miss(-1) then there must be an ENUM record with ENUMID = the first 8 digits of DEMOID concatenated with DEMO.DADNUM.

B5. For completed screeners (SCRN.SCRNRSLT = C0, CA, CC, CB, C1, C2, C3, C4), there must be an ENUM record where ENUM.PERSNUM = the screener respondent person number (ENUM.SCRESPX) and ENUM.SCRESP = X.

B6. NUMKID12 must equal the number of ENUM records with ENUM.AGE <= 12.

B7. NUMKID10 must equal the number of ENUM records with ENUM.AGE <= 10.

B8. If the ECPP respondent's relationship to the child is a brother/sister, other relative, or nonrelative (ENUM.RESPRELN = 3, 5, 6) then there must be an ENUM where ENUMID = the first 8 digits of BASMID concatenated with the child's ENUM.RESPNUM and the ECPP respondent must be older than 12 (ENUM.AGE >= 12).

B9. If the ECPP respondent is a grandparent of the child (ENUM.RESPRELN = 4) then there must be an ENUM where ENUMID = the first 8 digits of BASMID concatenated with the child's ENUM.RESPNUM and the ECPP respondent must be 24 or more years older than the child (ENUM.AGE >= child's DEMO.AGE94 + 24).

B10. For every relationship recorded in ECPP at A6, (RELATION[n] not = miss(-1)), there must be an ENUM record with ENUMID = BASEID concatenated with n.

B11. If the ECPP respondent is the child's mother (ENUM.RESPRELN = 1), then there must be an ENUM record with ENUM.PERSNUM = DEMO.MOMNUM.

B12. If the ECPP respondent is the child's father (ENUM.RESPRELN = 2), then there must be an ENUM record with ENUM.PERSNUM = DEMO.DADNUM.

C. Parent Relationships (ECPP)

Every person defined as a parent must have appropriate records and database values. The parent relationship structural edits check that expected records and database relationships are correct.

C1. If any mother relationship is recorded in ECPP at A6 (DEMO.RELATION[n] = 1), then there must be an ENUM where ENUM.PERSNUM = DEMO.MOMNUM.

C2. If any father relationship is recorded in ECPP at A6 (DEMO.RELATION[n] = 2), then there must be an ENUM where ENUM.PERSNUM = DEMO.DADNUM.

C3. If there is a mother or female guardian in the household (DEMO.HHMOM = 1 or 2), then there must be a MAMA record.

C4. If there is a father or male guardian in the household (DEMO.HHDAD = 1 or 2), then there must be a PAPA record.

C5. If there is a mother in the household (DEMO.HHMOM = 1), then the child's ENUM should represent this in the RELATION cell corresponding to the mother's enumeration number (ENUM.RELATION[MOMNUM] = 1).

C6. If there is a father in the household (DEMO.HHDAD = 1), then the child's ENUM should represent this in the RELATION cell corresponding to the father's enumeration number (ENUM.RELATION[DADNUM] = 2).

C7. If there is a mother in the household (not missing DEMO.MOMNUM) then there must be an ENUM record where ENUMID = the first 8 digits of BASMID concatenated with DEMO.MOMNUM and the mother must be between 13 and 55 years older (inclusive) than the child (ENUM.AGE <= child's AGE94 + 55 and ENUM.AGE >= child's AGE94 + 13).

C8. If there is a father in the household (not missing DEMOM.DADNUM) then there must be an ENUM record where ENUMID = the first 8 digits of BASMID concatenated with DEMO.DADNUM and the father must be between 13 and 55 years older (inclusive) than the child (ENUM.AGE <= child's AGE94 + 55 and ENUM.AGE >= child's AGE94 + 13).

C9. Every child must have one and only one mother (for every BASM there must be one and only one RELATION[n] = 1).

C10. Every child must have one and only one father (for every BASM there must be one and only one RELATION[n] = 2).

C11. If there is no mother or father in the household (DEMO.HHMOM not = 1 or 2 and DEMO.HHDAD not = 1 or 2) and the respondent is female, there must be a MAMA record but no PAPA record.

C12. If there is no mother or father in the household (DEMO.HHMOM not = 1 or 2 and DEMO.HHDAD not = 1 or 2) and the respondent is male, there must be a PAPA record but no MAMA record.

D. Common Items (ECPP)

Items asked only once per interview must be copied over to successive records. These edits confirm that parent information and parent preferences are identical for similar children.

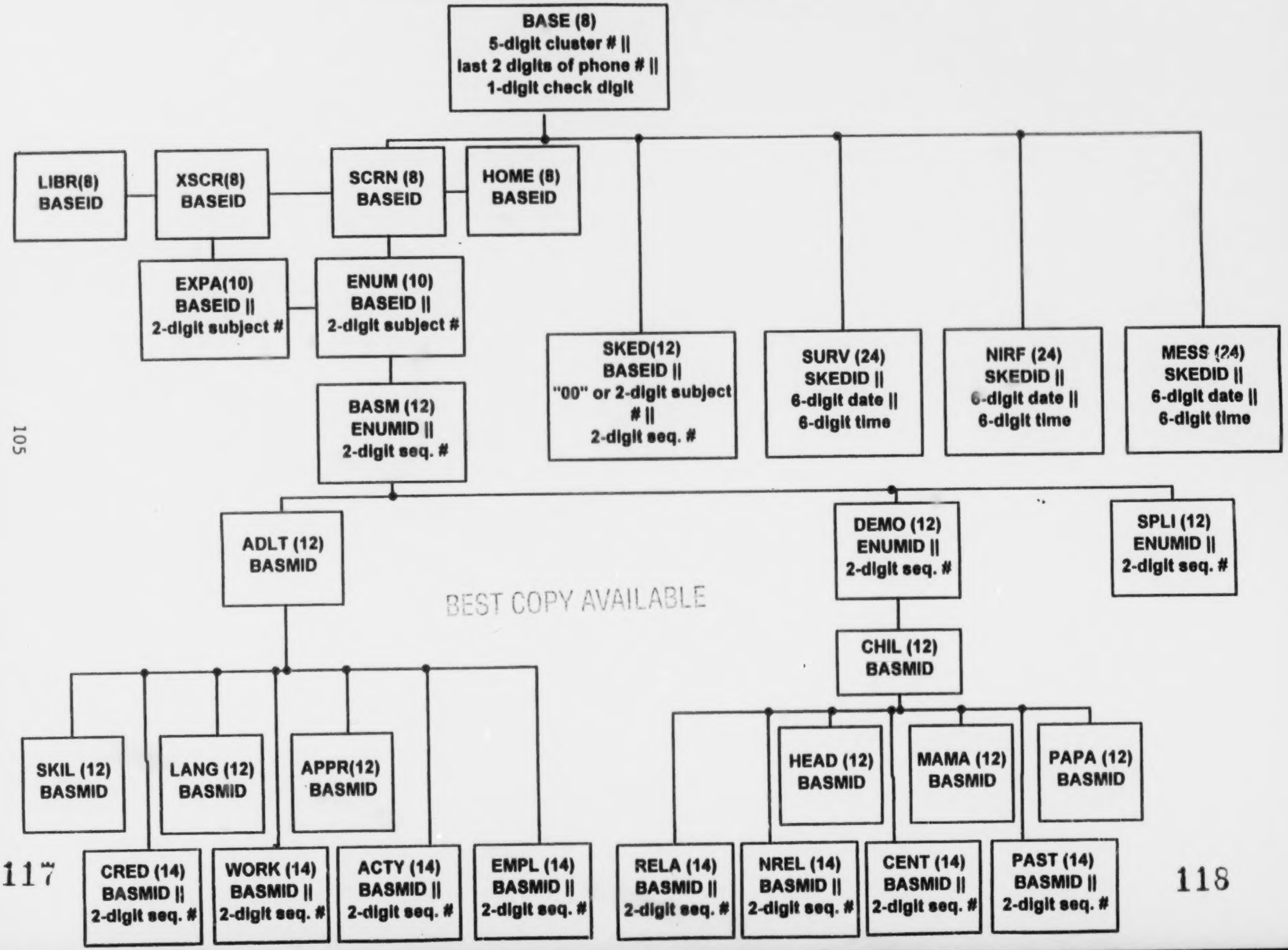
D1. All children with the same mother or same female respondent (all DEMOs with the same DEMO.MOMNUM or HHMOM = 2 and the same ENUM.RESPNUM) must have a MAMA record with identical information.

D2. All children with the same father or same male respondent (all DEMOs with the same DEMO.DADNUM or HHDAD = 2 and the same ENUM.RESPNUM) must have a PAPA record with identical information.

D3. All children in a household with ECPATH = I or N must have the Parent Preferences variables PPTRAIN, PPSICK, PPCONV, PPCOST, PPKIDS, PPTEACH, and PPENGL equal.

D4. All children in a household with ECPATH = K, S, or H must have the Parent Preferences variables PPTRAIN, PPSICK, PPCONV, PPCOST, PPKIDS, PPTEACH, and PPENGL equal.

Attachment 3: NHES: 95 Database Design Diagram


BASE (8) 5-digit cluster # || last 2 digits of phone # || 1-digit check digit
LIBR(8) BASEID
XSCR(8) BASEID
SCRN (8) BASEID
HOME (8) BASEID
EXPA(10) BASEID || 2-digit subject #
ENUM (10) BASEID || 2-digit subject #
SKED(12) BASEID || "00" or 2-digit subject # || 2-digit seq. #
SURV (24) SKEDID || 6-digit date || 6-digit time
NIRF (24) SKEDID || 6-digit date || 6-digit time
MESS (24) SKEDID || 6-digit date || 6-digit time
BASM (12) ENUMID || 2-digit seq. #
ADLT (12) BASMID
DEMO (12) ENUMID || 2-digit seq. #
SPLI (12) ENUMID || 2-digit seq. #
CHIL (12) BASMID
SKIL (12) BASMID
LANG (12) BASMID
APPR(12) BASMID
HEAD (12) BASMID
MAMA (12) BASMID
PAPA (12) BASMID
CRED (14) BASMID || 2-digit seq. #
WORK (14) BASMID || 2-digit seq. #
ACTY (14) BASMID || 2-digit seq. #
EMPL (14) BASMID || 2-digit seq. #
RELA (14) BASMID || 2-digit seq. #
NREL (14) BASMID || 2-digit seq. #
CENT (14) BASMID || 2-digit seq. #
PAST (14) BASMID || 2-digit seq. #

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Listing of NCES Working Papers to Date

Please contact Ruth R. Harris at (202) 219-1831
if you are interested in any of the following papers

Number	Title	Contact
94-01 (July)	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02 (July)	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03 (July)	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04 (July)	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05 (July)	Cost-of-Education Differentials Across the States	William Fowler
94-06 (July)	Six Papers on Teachers from the 1990-91 Schools and Staffing Survey and Other Related Surveys	Dan Kasprzyk
94-07 (Nov.)	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01 (Jan.)	Schools and Staffing Survey: 1994 Papers Presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02 (Jan.)	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03 (Jan.)	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk
95-04 (Jan.)	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings

Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
95-06 (Jan.)	National Education Longitudinal Study of 1988: Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data	Jeffrey Owings
95-07 (Jan.)	National Education Longitudinal Study of 1988: Conducting Trend Analyses HS&B and NELS:88 Sophomore Cohort Dropouts	Jeffrey Owings
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95-10 (Feb.)	The Results of the 1991-92 Teacher Follow-up Survey (TFS) Reinterview and Extensive Reconciliation	Dan Kasprzyk
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95-12 (Mar.)	Rural Education Data User's Guide	Samuel Peng
95-13 (Mar.)	Assessing Students with Disabilities and Limited English Proficiency	James Houser
95-14 (Mar.)	Empirical Evaluation of Social, Psychological, & Educational Construct Variables Used in NCES Surveys	Samuel Peng
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95-17 (May)	Estimates of Expenditures for Private K-12 Schools	Stephen Broughman
95-18 (Nov.)	An Agenda for Research on Teachers and Schools: Revisiting NCES' Schools and Staffing Survey	Dan Kasprzyk
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Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
96-02 (Feb.)	Schools and Staffing Survey (SASS): 1995 Selected papers presented at the 1995 Meeting of the American Statistical Association	Dan Kasprzyk
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Listing of NCES Working Papers to Date--Continued

Number	Title	Contact
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96-20 (Oct.)	1991 National Household Education Survey (NHES:91) Questionnaires: Screener, Early Childhood Education, and Adult Education	Kathryn Chandler
96-21 (Oct.)	1993 National Household Education Survey (NHES:93) Questionnaires: Screener, School Readiness, and School Safety and Discipline	Kathryn Chandler
96-22 (Oct.)	1995 National Household Education Survey (NHES:95) Questionnaires: Screener, Early Childhood Program Participation, and Adult Education	Kathryn Chandler
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Number	Title	Contact
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